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Virginia MEDICAL MONTHLY

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WALTER REED
ISSUE

August, 1949

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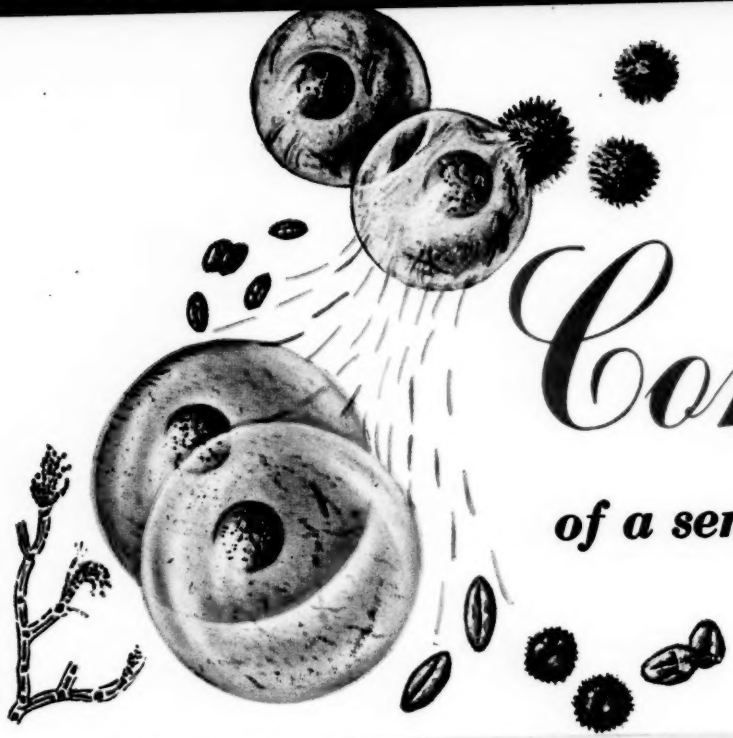

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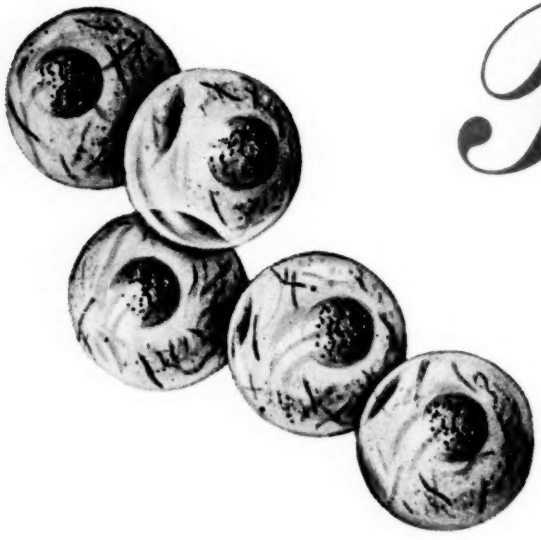

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Virginia Medical Monthly

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RICHMOND, VA., AUGUST, 1949

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GUEST EDITORIAL

Planning and Building Hospitals and Public Health Centers in Virginia

THE Virginia hospital planning and construction program is now well under way. Grants from state and federal funds have been approved for seventeen communities and counties. Administered by the State Department of Health under state legislation authorizing Virginia to participate in the benefits of the Hill-Burton Act, the program is designed to assist local areas. Coming at a time when the demand for additional hospital beds and public health centers is most acute, the program has enabled many communities to bring their building and expansion plans into reality.

During the past eight months construction has started on seven hospital projects and one public health center. Front Royal is building the new Warren Memorial Hospital. Abingdon is remodeling and expanding the Johnston Memorial Hospital. The old Mary Washington Hospital in Fredericksburg and the old King's Daughters' Hospital in Staunton are being replaced with new facilities. In Richmond, the sixteenth floor of the Medical College of Virginia hospital is being completed. The Loudoun County Hospital in Leesburg is being remodeled and expanded as is the Rockingham Memorial Hospital in Harrisonburg. A new public health center is being constructed in Amherst to serve Amherst County. The total cost of these eight projects including construction, equipment, architect's fees and other expenditures approximates eight million dollars. Some 450 additional beds will be made available to the areas served by the above hospitals.

It is anticipated that construction on four hospitals and five public health centers will start during the summer months. The new Louise Obici Memorial Hospital will be erected in Suffolk. Pearisburg will have the new Giles Memorial Hospital and Woodstock the new Shenandoah County Memorial Hospital. In Winchester, the Winchester Memorial Hospital will be remodeled and expanded. New public health centers will be constructed in Greensville, Prince William, Nelson and Northampton counties, and in the City of Roanoke. These projects will involve a total expenditure of more than five million dollars. The hospitals will make approximately 300 additional beds available.

The basic aim of the Hill-Burton program is an increase in availability of hospital and public health housing facilities. It is to be expected, however, that the fruits of the program will mean more than a mere increase in the number of physical plants. An expansion of hospital facilities should also mean an increase in medical personnel and services. Adequately designed and equipped public health centers will tend to improve and expand the public health activities of the area served. Thus the goal of more and better hospital and public health housing facilities for more people means better medical care and ultimately a higher level of health.

The strength of the Virginia hospital planning and construction program is based upon local initiative, local control and local responsibility. Aid can be granted only to those areas that take the initiative to qualify for participation in accordance with the

state hospital construction plan. This initiative covers a multitude of activities ranging from the raising of the necessary local funds to the development of by-laws and administrative policies for operation of the proposed facilities. It includes among many things the selection of a site, the selection of an architect, and the formation of an adequate staff, both, professional and non-professional. Back of this initiative are usually many hours of work to achieve the cohesiveness of purpose essential to insure success of the project.

Determination of policy and administrative control as well as ownership of the facility rests in the hands of the local sponsors upon completion of the construction. This principle of local control guarantees that the policies of operation will be in accordance with the local pattern. It provides for complete utilization of local initiative in solving local problems. All hospitals constructed in Virginia under the Hill-Burton program are subject to licensure by the State Department of Health as are all hospitals operating in the Commonwealth.

From local initiative and local control stems local responsibility—a responsibility to maintain and operate the completed facilities at a high level of efficiency. The pressing need for additional hospital beds and public health housing necessitates efficient, economical, and solvent operation at the local level. Upon completion of the project, the economic support must come largely from local sources. This means that the facility must be operated within the economic means of the local area. In addition, the large expenditure of local, state and federal moneys on current projects and the anticipated expenditures of the future demand that local areas realize full value of the money spent in terms of successful operational policies.

The hospital planning and construction program in Virginia is somewhat unique in that the financial aid to local areas is available from state as well as federal funds. Virginia is one of a small number of states in the nation providing state aid for hospital and health center construction under provisions of the Hill-Burton Act. The Commonwealth is one of an even smaller number which grants aid to voluntary non-profit agencies. Legislation on the Virginia statutes permitting contributions of public funds by towns, cities, or counties for hospital construction is also unique. State aid plus the enlightened hospital legislation has been an important factor in enabling many communities to enjoy participation in the hospital construction program.

To assist in financing the hospital and public health center construction program, Virginia receives annually for the five year period covered by the Hill-Burton Act, approximately $2,000,000 in federal aid. These funds are available to approved projects on a one dollar for two dollars matching basis. The 1948 session of the General Assembly appropriated $1,500,000 unconditionally and $1,000,000 conditionally to supplement the federal funds. In November 1948 Governor William M. Tuck released the $1,000,000 in conditional appropriations, thus making the entire $2,500,000 in state appropriations available. With both the federal and state funds at hand, approved projects have been allocated 52.61 per cent of the construction costs from state and federal monies. To match these grants, it has been necessary for the local areas to provide 47.39 per cent of the costs. All state and federal allotments currently available have been allocated to approved projects.

At the state level the core of the planning and construction program is the state plan as set forth in the publication "Survey of Hospital Facilities in Virginia". In this survey, based upon an extensive study of existing hospital and public health center facilities, made by the State Department of Health in 1947, the over-all hospital and public health center situation was analyzed as to current situations and

potential future needs. The resulting State plan is a suggestion to guide the development and construction of the facilities under the Hill-Burton Act. It is not a mandatory formula, but a flexible and adaptable pattern for improving hospitals and public health centers. It is designed to make the benefits of modern medical knowledge and hospital care more accessible, more efficient and more economical.

Interest on the part of the local areas in the hospital planning and construction program is increasing. This is true throughout the nation as well as in Virginia. The Hill-Burton Act was passed by Congress in 1946 with a life expectancy of five years. Since its inception the quality of attainment has been at such a high level throughout the nation and the need for financial assistance so great that it is now proposed to expand the Hill-Burton program to cover a period of ten years instead of five. Such an expansion would obviously enable many more communities throughout Virginia to provide modern hospital facilities for their residents.

The Virginia hospital planning and construction program is a "grass roots" program. The local community is envisaged as the focal point. At the core of the program is the belief that it is the prerogative and responsibility of the community to plan and develop a hospital or public health center suitable to its own needs within the scope and standards of the state plan. The primary purpose of state and federal financial backing is to supplement and assist local areas with their projects. The quality of service provided by the facilities constructed under the program will be determined by local sponsors, governing boards, and the communities they serve.

RONALD B. ALMACK

EDITOR'S NOTE: Mr. Almack is Director of the Bureau of Hospital Survey and Construction of the State Department of Health, Richmond.

Floral Eponym

TORREYA

TORREY, JOHN. 1798-1873

JOHN TORREY was the son of Capt. William Torrey, a Revolutionary soldier. He graduated in medicine at Columbia in 1818. He was an eminent chemist and mineralogist, but it was in botany that he achieved his greatest fame. He was at various times Professor of Chemistry, geology, mineralogy, natural history and botany at the United States Military Academy, Princeton, and Columbia and assayer in the United States Assay Office. He wrote extensively on botany. Yale College gave him the honorary M.A. degree in 1823 and Amherst an LL.D. in 1845. The students of the College of Physicians and Surgeons remembered him as an excellent teacher. He died at his home in the grounds of Columbia College on March 10, 1873.

The Torreyas are handsome evergreen trees closely kin to the yew. They have drupe-like fruit about an inch long.

XUM

JAMES THACHER AND HIS INFLUENCE ON AMERICAN MEDICINE*

HENRY R. VIETS, M.D.,
Librarian, Boston Medical Library,
Boston, Massachusetts.

Three years from now you will have the honor of celebrating the centenary of the birth of Walter Reed for whom this lecture is fittingly named. He is a towering figure in American medicine, an Army officer not dulled by the drab routine but ever to carry the spark of genius, so fully discerned by the far-seeing Welch in those early historic days at the Hopkins. That same spark was to burst forth in brilliant display many years later in the far-off Havana and mark an epoch in the frequently turbulent flow of the advancement of medical knowledge. Son of an obscure man of God, born in humble circumstances in Belroi, Reed became Virginia's most distinguished physician. When opportunity knocked, he, like Oliver Wendell Holmes, had 'the mind prepared,' even as Banting, Minot, Fleming, Florey and Trueta in our day. The door to medical education must be broad not to screen out 'the most distinguished' and Egyptian walls be no barrier to those qualified to enter. The Reeds of medicine are among us today and for them, often indistinguishable in the mass, our efforts must be bent. A Welch may get an inkling of future brightness, as he did with Reed, but most of us must be content with flag at mast and giving our best to those we are privileged to teach.

James Thacher, although he did not reach the heights scaled by Walter Reed, made for his time a notable contribution to medical education as a teacher of many boys in his home, an author of the first American textbook of medicine and an historian who collected for posterity the records of the lives of our medical worthies. In addition, Thacher wrote, according to John Adams, "the most natural, simple, and faithful narration of facts that I have seen in any history of that period [the American Revolutionary War]." Adams was writing in 1824, over forty years after the surrender of Cornwallis at Yorktown but, after reading Thacher's *Military Journal* today, we would not disagree with Adams' opinion.

Besides his *Practice, Military Journal* and *Medical Biography,* Thacher wrote six other books, many of them produced at a time when ill health forced him to relinquish partly his extensive practice and embark upon antiquarian and historical endeavors. Some of these books rest in the oblivion of time, only of interest to the keen-nosed collector of 'peripheral medicine' or to the dusty librarian, worthily holding in her charge every bit of matter surrounding our predecessors so that years later someone like myself will force her to reach into her capacious pocket, dark and gloomy though it be, and bring forth a little known volume, a 'rare item,' a long-lost edition, perhaps only to 'lay a ghost.' Thacher would have approved of your Academy and library, as he did of the Boston Medical Library, a sprawling infant in his day but not unmindful, as you are, of its duty to those who had passed that way before.

A MILITARY JOURNAL

While serving as a surgeon in the American Revolutionary War from 1775 to 1783, James Thacher kept a detailed diary, a day-by-day account, enlivened with intimate biographical sketches of officers in the field. A good picture of the spirit of Washington's Army, especially under the adverse circumstances of hunger, fatigue and cold, the journal also provides detailed descriptions of events almost unequalled by any of his contemporaries. He was a keen observer of the habits of his fellow-soldiers and, for a young country boy untrained in narration, his *Journal* must be considered a remarkable historical document.[1] Unfortunately, Thacher failed to give many details of his hospital experiences, except in regard to a smallpox inoculation, which he carried out on a large scale.

Thacher, a young man of twenty-one, fresh from an apprenticeship with Abner Hersey, the leading physician in Barnstable, Massachusetts, where the young Whig was born, became a surgeon's mate under John Warren in the provincial hospital at Cambridge, Massachusetts, in July, 1775. Warren, the brother of Joseph Warren, killed on June 17 at Bunker Hill, although only a year older than Thacher, was the senior surgeon to the hospital.

*The Walter Reed Lecture delivered before the Richmond Academy of Medicine, February 10, 1948.

Thacher's account of his medical examination is perhaps not without interest even today. "On the appointed day," he wrote, "the medical candidates, sixteen in number, were summoned before the board for examination. This business occupied about four hours; the subjects were anatomy, physiology, surgery and medicine. It was not long after, that I was happily relieved from suspense, by receiving the sanction and acceptance of the board, with some acceptable instructions relative to the faithful discharge of duty, and the humane treatment of those soldiers who may have the misfortune to require my assistance. Six of our number were privately rejected as being found unqualified. The examination was in a considerable degree close and severe, which occasioned not a little agitation in our ranks. But it was on another occasion, as I am told, that a candidate under examination was agitated into a state of perspiration, and being required to describe the mode of treatment in rheumatism, among other remedies he would promote a sweat, and being asked how he would effect this with his patient, after some hesitation he replied, 'I would have him examined by a medical committee'."[2]

Within a few days he got his first glimpse of George Washington and wrote, "It was not difficult to distinguish him from all others; his personal appearance is truly noble and majestic, being tall and well proportioned. His dress is a blue coat with buff colored facings, a rich epaulette on each shoulder, buff under dress, and an elegant small sword; a black cockade in his hat."

Fig. 1—James Thacher and Susannah Hayward about the time of their marriage in 1785.
(From pastel portraits in the possession of Thacher's great-granddaughter, Miss Mary Russell Hodge of Plymouth.)

Thacher was soon busy, however, tending to the wounded from Bunker Hill but not too busy to note that "paper bills now circulate instead of species," or the arrival of troops from Pennsylvania and Maryland, "remarkable for the accuracy of their aim." In October he described the quick trial and conviction of Benjamin Church, the Surgeon General, for traitorous correspondence with the enemy in Boston. By November the hospitals were crowded with sick soldiers from camp—"autumnal fevers and dysenteric complaints, which have proved fatal in a considerable number of instances."

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By January, 1776, the Army was reduced to a very critical situation, being obliged to substitute new troops and militia in place of those who had been in service five or six months, and this exchange was made within musket shot of the enemy's lines. During part of this period Thacher wrote, "our numbers were not sufficient to man the lines, nor was there powder enough in camp to furnish four rounds a man." The troops captured some cannon from the army in Boston but these were old and many of them unserviceable; and Thacher felt that, "had the enemy been acquainted with our situation, the consequences might have been exceedingly distressing." In February, 1776, John Morgan of Philadelphia was appointed Director General of the hospitals, replacing Church. After Morgan arrived in Cambridge a new and systematic arrangement of the medical departments took place. Thacher was subjected to another examination by Morgan and received from him the appointment of physician's mate to David Townsend in the regiment commanded by Colonel Asa Whitcomb stationed in the barracks on Prospect Hill. Young Thacher was glad to exchange his hospital job for that of a regimental surgeon, particularly under the command of such an outstanding figure as Whitcomb, with his friend Townsend, a survivor of Bunker Hill and a former pupil of Joseph Warren, as the regimental surgeon. The regiment was soon ordered to march to Roxbury, where they occupied the house formerly belonging to Governor Shirley, and all the troops were alerted for a general attack on the heights at Dorchester which occurred in March of 1776. Thacher describes the assault in some detail and noted that Washington was present, "animating and encouraging the soldiers and they, in return, manifested their joy." On March a flag of truce came out from Boston acquainting Washington that General Howe had come to the determination to evacuate the town, and the fleet with the evacuating troops sailed on March 17. The larger part of the army under Washington was then ordered to New York, but those that remained, including Thacher, entered Boston on the 20th. Thacher wrote, "while marching through the streets, the inhabitants appeared at their doors and windows; though they manifested a lively joy on being liberated from a long imprisonment, they were not altogether free from a melancholy gloom which ten tedious months' seige had spread over their countenances. The streets and buildings presented a scene, which reflects disgrace on their late occupants, exhibiting a deplorable desolation and wretchedness." Townsend, the regimental surgeon, found his parents and sister in Boston, and young Thacher took up his abode in their house. He mentions the Old South Church and notes that the inside was entirely destroyed by the British, "the sacred building occupied as a riding school for Burgoyne's regiment of dragoons." The North Church had been entirely demolished and consumed for fuel.

Always a physician, Thacher was delighted to record that one of his soldiers found in Boston a human skeleton in complete preparation, left by a British surgeon, "which I received as an acceptable present." On July 3 orders were given for an inoculation for the smallpox of all soldiers and inhabitants of the town, as a general infection of this disease was apprehended. Townsend and young Thacher were constantly engaged in this work. By August 5 his entire regiment, consisting of 500 men, had gone through the smallpox by inoculation, and all except one Negro recovered. This, of course, was direct inoculation with smallpox matter before the discovery of vaccination with cow-pox by Jenner, the same method that had proved so valuable in the hands of Zabdiel Boylston in 1721 in Boston.

After the inoculations were finished the regiment prepared to march from Boston to Ticonderoga and, on August 7, they marched out of town with colors displayed and drums beating. Thacher was somewhat indisposed and he was permitted to remain in town to take charge of the sick soldiers until he recovered his health. This he did on August 20, when he said good-bye to the town of Boston, where he had resided very pleasantly for five months. "I am destined," he wrote, "to a distant part of our country, and know not what sufferings and hazards I shall be called to encounter while in the discharge of my military duties."

He commenced his journey in company with another officer and fourteen men. His route led through Worcester, Springfield, and over the Green Mountains to Skeensbury,[3] the place of rendezvous for the Continental troops and militia destined for Ticonderoga. Here they embarked upon a boat to cross Lake Champlain.

Soon after arriving in Ticonderoga one of the soldiers was bitten in the hand by a rattlesnake.

Thacher describes the incident and the treatment that was used. In a half-hour the whole arm and shoulder was swollen to twice its normal size and the skin had become a deep orange color. Soon half the body became swollen in a similar manner and nausea had set in. The man's condition was critical. Thacher and two other physicians procured a quantity of olive oil and requested the patient to swallow it in large and repeated doses until he had swallowed a quart. At the same time there was rubbed into the affected limb a large quantity of mercurial ointment. In about two hours the patient began to recover, and in forty-eight hours he was well.

Thacher describes in considerable detail the formation and character of the army. Calculating that services of an army would be required for a short period of time only, most of the troops in the field in the summer of 1776 were minutemen, volunteers, and militia, and it was a considerable time before they were regularly organized into regiments and brigades. In many instances the soldiers were indulged the privilege of choosing their own officers, and these officers too frequently proved unqualified to discharge their military duties. Because of the short terms of service there was a continual fluctuation of men from camp to farms. There was also trouble in connection with the troops from the southern states being incorporated and associated in military duty with those from New England. Many of the officers from the South were gentlemen of education and unaccustomed to that equality which prevailed in New England and, as Thacher justly remarks that, "however desirable it could scarcely be expected that people from distant colonies, differing in manners and prejudices, could at once harmonize in free intercourse. Hence we too frequently hear the burlesque epithet of Yankee from one party, and Buckskin, by way of retort, from the other."

To encourage enlistments each soldier was to receive a bounty of $20 and 100 acres of land if he served during the war. The monthly pay ranged from $75 for a full colonel to $6.67 for a private. Each commissioned officer was allowed the privilege of taking a soldier from the ranks for a waiter, and he was exempt from camp and other duties except in time of action.

The autumn of 1776 passed pleasantly enough in Ticonderoga. Thacher learned of Bushnell's experiments with the torpedo, although he did not actually witness its use. News of a serious character, however, soon came to the fort when, on October 15, it was learned that the fleet of vessels on Lake Champlain had been destroyed and that the British Army was established at Crown Point, a prominent peninsula on the western shores of the Lake, a few miles to the north of Fort Ticonderoga. It was expected that the British would attempt to capture the fort at Ticonderoga but, much to everyone's apparent surprise, when a small force of troops reconnoitered Crown Point about November 1, they found that the British had retired to Canada for the winter. The rest of the year was a fairly pleasant one, and certainly Thacher and his regiment were much better off than was General Washington and the Continental Army in New Jersey. No action, except for the raids of the hostile Indians, took place in Ticonderoga until after April in 1777. The Indian raids, however, were persistent and often severe, and many of the wounded were brought back to be under Thacher's care.

On April 1, 1777, Colonel Whitcomb, who was the commanding officer of Thacher's regiment, left the service, his term having expired. At this time Thacher applied to Jonathan Potts, the director general of his department, for transfer from the status of a regimental surgeon to that of a surgeon's mate in the general hospital. He was accepted, and his friend, David Townsend, was appointed senior surgeon at the same time. In the general hospital at Ticonderoga they found eighty soldiers with various diseases and eight or ten men who had been cruelly wounded by savages, some of them scalped.

Thacher seems to have had plenty of time on his hands for diversions. He speaks of exploring the country, and he went across Lake Champlain to Mount Independence, directly opposite Ticonderoga. A strong fort had been established on the summit of the mountain, and communications between the two places was maintained by a floating bridge and protected by a boom which was supposed to confine the British fleet north of this point. Thacher, who sometimes took a romantic view of life, describes the scene from the top of Mount Independence in some detail:

"From this commanding eminence we had one of the most singularly romantic views which imagination can paint. Northward we behold Lake Champlain, a prodigious expanse of unruffled water, widening and straighten-

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ing as the banks and clifts project into its channel. This lake extends about one hundred miles toward Quebec, and is from one to five miles wide. On each side is a thick uninhabited wilderness, variegated by hills and dales; here the majestic oak, chestnut and pine, rear their lofty heads; there the diminutive shrub forms a thicket for the retreat of wild beasts. Looking southwest from our stand we have a view of part of Lake George, emptying its waters into Lake Champlain, near Ticonderoga. Turning to the east, the prodigious heights called Green Mountains, ascending almost to the clouds, are exhibited to view, with the settlements in that tract of territory called New Hampshire grant. The ancient fortress at Crown Point is about twelve miles north of this place; it is by nature a very strong position, but it has been abandoned by both armies."

Suddenly this quiet and romantic existence was interrupted. On the night of July 5, 1777, Thacher was rudely awakened with the astounding news that both Ticonderoga and Mount Independence had to be evacuated at once. He could scarcely believe the information, but immediately began to collect the sick and wounded and as much of the hospital stores as possible. The men and equipment were embarked on boats at the shore at three o'clock in the morning of July 6 and commenced the voyage down the South bay of Lake Champlain to their original rendezvous at Skeenesborough, a distance of about thirty miles. The little fleet was heavily ladened with cannon, tents, provisions, invalids, and women, but Thacher was not averse to remarking on the beauty of the voyage and the pleasant scenery. He wrote, "The night was moon light and pleasant, the sun burst forth in the morning with uncommon lustre, the day was fine, the water's surface serene and unruffled. The shore on each side exhibited a variegated view of huge rocks, caverns, and clifts, and the whole was bounded by a thick, impenetrable wilderness. My pen would fail in the attempt to describe a scene so enchantingly sublime. The occasion was peculiarly interesting, and we could but look back with regret, and forward with apprehension. We availed ourselves, however, of the means of enlivening our spirits. The drum and fife afforded us a favorite music; among the hospital stores we found many dozen of choice wine, and we cheered our hearts with the nectareous contents."

The little gay band evacuating Ticonderoga felt reasonably safe, but they were far from being secure. Burgoyne was at their heels, and in less than two hours after landing the enemy attacked them from the sea, having broken through the bridge and the boom at Ticonderoga, thought to be impenetrable. Shortly the British troops and Indians landed and rapidly advanced on the party. Nearly all stores and equipment were abandoned and the troops hastened southward, marching all night, with the Indians right behind them, to Fort Ann, about eight miles to the south, where they arrived at five o'clock on the morning of the 7th. They received a small reinforcement from Fort Edward, ten miles further to the south of them, and finally were able to repel the British after a capture of some of their prisoners. A British surgeon who was captured returned to Thacher some of his books and papers which had been taken out of his chest at Skeenesborough two days before.

Fort Ann being of no particular importance, the party marched to Fort Edward on the Hudson, two miles south of Hudson Falls. There they met the main army from Ticonderoga and Mount Independence who had marched south through lower New Hampshire. On the 25th of July young Thacher set up his tents and cared for the sick and wounded, but within a few days was ordered to move them by boat down the Hudson to Albany, a distance of a little over fifty miles. This took him three days, with his forty patients.

Albany was a town of about three hundred houses. The hospital, which had been erected during the French war, was situated above the town in a two-story building containing about forty wards capable of accommodating five hundred patients.

The army, in the meantime, had also evacuated Fort Edward and now established itself at Stillwater, nor far from Saratoga, where an important battle was shortly to be fought in the middle of September. By the 21st of the month Thacher's hospital was receiving the officers and soldiers wounded in the battle of Saratoga. Several, he states, had received very formidable and serious wounds and had to be subjected to capital operations.

In October one of his patients was General Arnold, whose leg had been badly fractured by a musket ball. Thacher noted that Arnold was "very peevish and impatient under his misfortunes and requires all my attention during the night, but I devoted an hour in writing a letter to a friend in Boston detailing the particulars of the late battle."

Burgoyne, in the meantime, had been captured,

with a number of ladies of high rank, and on the 21st of October arrived in Albany and was put up in the hospitable mansion of General Schuyler. The same kind of treatment was extended to the officers of lesser rank and even to the soldiers who were wounded and captured on the field of battle. On the 24th of October Thacher noted that the hospital was now crowded with patients. Hessians were given exactly the same accommodations as the Continental troops and received equal care and attention. In many cases, however, the foreign troops were under the care of their own surgeons. Thacher thought that the English surgeons performed with skill and dexterity but the Germans, with few exceptions, were no credit to their profession. Many of them seemed destitute of all sympathy and tenderness towards the patients under their care. The hospital was not only crowded, but over five hundred patients were cared for in the Dutch Church and in private homes, in addition to an equal number in the hospital. There were thirty surgeons and surgeon's mates on duty, and all were constantly employed.

Thacher devoted all his time from eight o'clock in the morning to late in the evening caring for his patients. He speaks of amputations, the trepanning of fractured skulls, and other formidable types of surgery and gives a vivid description of the patients and their sufferings such as only could be given by a thoughtful, considerate surgeon who had the best interests of his men at heart. Some details of the operations are given showing that Thacher was a bold and courageous surgeon as well as an acute observer, sorting out the strong from the weak, the courageous from the cowards.

In February of 1778 many of the wounded committed to his care in October of the previous year had recovered, and Jonathan Potts, the director general, presented young Thacher with a generous and handsome present, consisting of a furlough of forty days, to visit his home and friends in New England. He rode on horseback first to Boston and then to Barnstable, Cape Cod, where he was born. He tells us little about the journey itself except that he returned to duty in Albany two days before the expiration of his furlough, a conscientious young man indeed.

In the meantime, General Washington was having his worst winter at Valley Forge, and it was not until Spring that matters began to improve in the Continental Army. Thacher gives a striking account, which he received from a friend, of the conditions at Valley Forge.

The Spring wore away without activity but on June 1, 1778, the hospital was moved from Albany to High Lands on the Hudson opposite what is now known as West Point. Patients, hospital stores, and baggage were moved by boat, a pleasant voyage down the Hudson. The hospital was quickly established in the house of Colonel Beverly Robinson, a Loyalist from New York who had used this mansion as his summer residence. Again, as things were quiet, Thacher had some time to explore the country. He climbed Sugar Loaf Mountain and various other high points near it and otherwise enjoyed himself. He visited other hospitals in the neighborhood such as the one at Fishkill, where he found some of his old friends, Adams and Eustis, from Boston. He seems to have made himself at ease with all the general officers in the camp and was formally introduced to Kosciuszko from Poland, who had recently arrived in the country and was employed in the engineering department with the rank of Colonel. In company with Gouverneur Morris and William Brown, the physician-general, he rode into the camp at White Plains. While waiting on Colonel Scammell, the adjutant general, Thacher requested a change from the office of hospital surgeon to that of a regimental surgeon, similar to the one he had occupied in the past when at Ticonderoga. Apparently he was anxious for more active service, having had little to do since his furlough the first of the year. Brown, however, prevailed upon him not to dissolve his connections at that time with the general hospital.

Thacher then went on a further trip, to Bradford and then on to Danbury, Connecticut. The trip was made by horseback and apparently it was a pleasant diversion. He returned on August 7 and found that many new cases had come in to the hospital, mostly of putrid fever and dysentery.

In September Thacher reported the arrival of Major General Israel Putnam with a division of troops from Maryland and one from Virginia. This is his first contact with soldiers from the South, but it became an intimate one, as Brigadier Generals Woodford and Muhlenburg took up their quarters in the hospital, along with General Putnam. Putnam, he noted, was "corpulent and clumsy, but carries a bold, undaunted front. He exhibits little of

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the refinements of the well-educated gentleman, but much of the character of the veteran soldier."

Washington paid an unexpected visit to the hospital in October, and Thacher had the pleasure of showing him through the different wards. Washington showed great interest in the sick and wounded, and in general gave approbation to the way the hospital was conducted. Thacher's account of the personal appearance of Washington is one of the best on record and is worth quoting in detail. "The personal appearance of our Commander in Chief is that of the perfect gentleman and accomplished warrior. He is remarkably tall, full six feet, erect and well proportioned. The strength and proportion of his joints and muscles appear to be commensurate with the preeminent powers of his mind. The serenity of his countenance, and majestic gracefulness of his deportment, impart a strong impression of that dignity and grandeur which are his peculiar characteristics, and no one can stand in his presence without feeling the ascendancy of his mind, and associating with his countenance the idea of wisdom, philanthropy, magnanimity, and patriotism. There is a fine symmetry in the features of his face, indicative of a benign and dignified spirit. His nose is strait, and his eyes inclined to blue. He wears his hair in a becoming cue, and from his forehead it is turned back and powdered in a manner which adds to the military air of his appearance. He displays a native gravity, but devoid of all appearance of ostentation. His uniform dress is a blue coat, with two brilliant epaulettes, buff colored under clothes, and a three cornered hat, with a black cockade. He is constantly equipped with an elegant small sword, boots and spurs, in readiness to mount his noble charger. There is not in the present age, perhaps, another man so eminently qualified to discharge the arduous duties of the exalted station he is called to sustain, amidst difficulties which to others would appear insurmountable, nor could any man have more at command the veneration and regard of the officers and soldiers of our army, even after defeat and misfortune. This is the illustrious chief, whom a kind Providence has decreed as the instrument to conduct our country to peace and to Independence."

There was a good deal of entertainment by General Muhlenburg and others when Malachai Treat, the physician general, visited the hospital. Muhlenburg gave a dinner for forty-one officers, the tables being "furnished with fourteen different dishes, arranged in a fashionable style." General Putnam presided; many toasts were pronounced, accompanied by humorous and merry songs, and in the evening there was military music and dancing, which continued to a late hour in the night. General Muhlenburg, who had previously been a minister of a parish in Virginia, "participated in the spirit of the times, exchanging his clerical profession for that of a soldier." He had raised his own regiment of soldiers, and he was appointed their commander.

Thacher was greatly impressed by the boys from Virginia, and on the tenth of November, 1778, asked to be transferred to their regiment as a surgeon. This was accomplished, and he took up his quarters with Colonel George Gibson and the other officers. It is a little surprising that this relatively uneducated Cape Cod boy, puritanical in mind, should have been accepted as a surgeon by the fun-loving Virginia regiment. He must have had something in his character that appealed to the men from the Southern state, although he does not always seem to have been happy in their relaxed discipline and habits which, he thought, "almost approached dissipation." The officers from Virginia and Maryland adopted a practice of giving suppers alternately, with music and dancing through half the night, which caused Thacher to remark that "they do not accord precisely with many own views of time well spent, although I am frequently enticed to a participation in their banqueting revels."

Apparently Thacher had a capacity for making friends easily, for he speaks of dining with Captain Carter at West Point, visiting friends in Fishkill, and even waiting on the Marquis de la Fayette. He was received by the Marquis in a polite and affable manner. La Fayette had just recovered from a fever and was in his chair convalescing. Then only twenty-one years of age, he was described by Thacher as "not very elegant in his form, his shoulders being broad and high, nor is there a perfect symmetry in his features, his forehead is remarkably high, his nose large and long, eyebrows broad and projecting over a fine animated hazel eye. His countenance is interesting and impressive. He converses in broken English, and displays the manner and address of an accomplished gentleman." Thacher says that he was highly hon-

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ored by this interview; his keen eye and power of description amply justify the meeting as recorded in his diary for November 27, 1778.

The Virginia regiment gave some gay parties over Christmas and New Years. After a long dinner and dancing, the officers gathered in General Muhlenburg's quarters at the hospital, where an elegant supper was provided. Not one of the company was permitted to retire until three o'clock in the morning. A number of ladies were present. "Thus," comments Thacher, "have the gallant Virginians commenced the new year."

The winter of 1779 was a mild one in Albany, although some of the soldiers suffered from exposure while living in canvas tents. By April the weather had become very pleasant, and young Thacher bought a handsome bay horse for six hundred dollars. This amount indicated the depreciation value of paper money, which he had received for pay; for the horse, he reports, could not be valued at much more than eighty dollars in silver. In the Spring the Virginia regiment and others were paraded before Baron Steuben, a marked disciplinarian with a scrutinizing eye. He took into his hands the muskets and accoutrements of each soldier, examining them with particular accuracy and precision. From Thacher, the surgeon, he required a list of the sick, with a particular statement of their accommodations and modes of treatment, and even visited some of the sick in their cabins. Steuben at the time was inspector-general with the rank of major general in the Army.

As summer approached, Thacher rode around the country on his horse, visiting various military installations and, apparently, always welcomed by the officer in charge. On the twentieth of June he was in West Point, and there he received a letter from his old friend, David Townsend, who had become surgeon to the military hospital at Providence, Rhode Island. He invited Thacher to accept the position of surgeon to the Massachusetts regiment under Colonel Henry Jackson, which was then in Providence. Thacher's chief reason for considering this new appointment appears to have been that the officers in the Massachusetts regiment received compensation in clothing and other articles which he could not claim while serving with the Virginia regiment. He felt that it was proper, moreover, that officers should serve in the line of their own state, and though he had enjoyed the most friendly intercourse and numerous kind favors from the Virginians, he "preferred the manners and habits of the New Englanders." He therefore decided to join the Massachusetts regiment and left West Point on the second of July, arriving in Providence on the ninth. On the way his horse was seized with distemper, and he was forced to dispose of the animal. The journey took him through Litchfield, Farmington, Hartford, and across the Connecticut River to East Hartford. There he found the whole country in a state of alarm, as the enemy had landed in New Haven. He then passed through Windham and finally reached his old friend Townsend. Colonel Henry Jackson accepted him at once as a surgeon to the regiment, and he commenced his duties the day he arrived.

In August, 1779, the British had established a post on the Penobscot River in Maine, having approached there from Halifax. An expedition was planned to overcome this force, as the invasion of Maine had excited great indignation among the people. Colonel Jackson's regiment was added to the force, and they marched to Boston. The regiment consisted of four hundred men, completely uniformed and well-disciplined, and not inferior, according to Thacher, to any in the Continental Army. They completed the forced march from Providence to Boston, a distance of forty miles, in twenty-four hours. They were treated with great respect, and a dinner was given at the Bunch of Grapes tavern for the officers before they departed in transports. Even after the troops were on board, the officers returned to the Bunch of Grapes, where a liberal and elegant entertainment was provided. They sailed on a brig carrying eight guns, but had a convoy of the *Renown* of fourteen guns and put into Portsmouth Harbor, encamping at Kittery. In the meantime, General Lovell, in charge of the Penobscot expedition, had been forced to retire, for the British had been augmented by a large fleet which had arrived from New York. The Penobscot expedition ended disgracefully, with the troops scattered and their vessels abandoned. Thacher's regiment, which had not taken part, returned to Cambridge, where they encamped on the Common and then marched into Boston.

In September the regiment returned to Providence and almost immediately made ready to march into New Jersey. They crossed the Hudson at King's Ferry, and in December they camped at

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Morristown. There was great suffering that year, for many of the troops were ill provided with clothing and shelter. In addition to the miserable canvas tents, the troops were greatly affected by a scarcity of provisions. The weather, too, was much worse than that of the year before. Thacher describes in great detail the sufferings of the soldiers. When enlistments ran out, men were only too glad to leave the Army and return home, and there was great difficulty in recruiting new men for the service.

With the coming of the Spring there arrived in camp the usual Congressional Committees for the purpose of investigating the circumstances and condition of the Army. Thacher was asked to present complaints and grievances to them, acting, apparently, as a natural leader. Conditions became somewhat better with the reappearance of Baron Steuben and the return of La Fayette from France, so that by June four battalions of troops could be paraded before the committee from Washington, in the presence of General Washington, and make a respectable showing. By July Thacher found the troops in excellent shape as far as their health was concerned, but there were many perplexing incidents of a disposition occasioned by absence from home, which he called "nostalgia." This was particularly so in the recruits from New England, who became dull and melancholy with loss of appetite, restless nights, and great weakness.

Great excitement was caused by the discovery of the treachery of General Arnold and the capture of Major John André of the British Army. Regiments were immediately sent to West Point, and there Thacher witnessed the execution of André in October, which he described in detail. He remained in West Point during the fall of 1780 and in January, 1781, he found himself in winter quarters with his brigade about two miles from West Point itself, a situation which he found singularly romantic, on a highly elevated spot surrounded by mountains and craggy rocks just above the banks of the Hudson, a position which afforded a splendid view of the country for many miles in all directions. There was no longer any reason to complain of his accommodations, for the huts were warm and comfortable. Wood was in abundance at the door, and there was a tolerable supply of provisions. His only real complaint at that time was the little value to the paper money which the troops received for their services.

After the turn of the year Thacher remained in Highlands and took part in a good many local skirmishes and had a few wounded to care for. At one time he went down the Hudson to Crompond, an advanced base twenty miles below West Point, and there took charge of a number of wounded. This advanced position was almost within the British lines, and he tells stories of the raiding that went on by irresponsible people taking advantage of the disturbed sector between the British and the Continental forces. The marauders took the name of "cowboys" and "skinners" and apparently carried out the most atrocious deeds in an effort to terrorize the people. Some of the soldiers, as the result of these skirmishes, were so severely wounded that his friend Eustis was also called in to aid him. A side-light on the practice of medicine in 1781 is given in the history of a soldier who had received a dangerous wound through the shoulder and lungs, so that air escaped from the wound at every breath. He and Eustis dilated the wound and then Eustis decided that, as the patient had not sustained a copious loss of blood, repeated blood-letting was necessary. In spite of this drastic treatment the patient recovered. Eustis was a firm believer in blood-letting, and even when he became sick himself with a minor illness he requested Thacher to bleed him as the principal means of treatment.

By April Thacher had returned to Highlands, where he again inoculated all the troops against small pox. He reports that he had only four deaths out of five hundred men inoculated. Later in the month Thacher went by horseback to New Windsor to pay his respects to John Cochran, the new director general of hospitals, who had succeeded Shippen.

In June the troops began a march, crossing the Hudson and establishing themselves at Tarrytown. There Rochambeau met them, and the troops were reviewed in his presence by Washington. Thacher, with his usual facilities of making friends, soon became acquainted with the French officers; and they invited him to an elaborate dinner, which he describes in detail. On the seventeenth of July a new corps of light infantry, selected from several New England regiments, was formed under the command of Colonel Alexander Scammell. This was a picked group of men and officers who were to serve in advance of the main army and be con-

stantly prepared for active and hazardous service. Much to Thacher's pleasure he was asked to become the surgeon to Scammell's corps, thus indicating the high respect that the officers of the line had for this young doctor. He accepted at once and with Scammell's light infantry, in the autumn of 1781, he marched to Trenton and then to Philadelphia on the way to Yorktown. The main body of the army left Annapolis by boat, sailed down Chesapeake Bay into Hampton Roads and landed on September 22, about twelve miles from Yorktown. Within a week they had moved up to within a mile of the town. On the way he passed through Williamsburg and saw the public buildings and the college. Although the buildings were splendid the water, from the doctor's viewpoint, was "extremely brackish and disagreeable." Then Colonel Scammell was surprised and captured, but his corps continued in action. Violent battles, under the general command of Washington, with Steuben, La Fayette and Rochambeau as aides, were fought in October in the field. Thacher, too, had to fight against weakness and fever, which had attacked many of the troops from New England. He then witnessed the surrender of Lord Cornwallis and gave a detailed account of the celebrated event. Being a mounted officer he was able to move around and see almost everything that was happening, and he took advantage of this in describing what actually took place on the field.

The troops then returned to West Point, where they encamped again at Highlands and spent the winter. Thacher seems to have kept himself in excellent health, for he could only report in December, 1781, that he had a mild attack of inflammatory rheumatism but otherwise had no illness during the seven years of military service. In the Spring of 1782 he was busy again with smallpox inoculations, and by April 5 he had completed this aspect of his work. He then took a furlough, with his friend Eustis, back to his home in Barnstable. In the latter part of May he returned to the camp on the Hudson and there, except for a few trips around the country and one expedition to Philadelphia, he remained until he was mustered out of the service on January 1, 1783, and his diary ends at this point, with the following words:

"This day I close my military career, and quit forever the toils and vicissitudes incident to the storms of war. To my military companions I bid a final adieu, and hope to enjoy in future the blessings which attend a virtuous course of domestic life. I retire with honorable testimonials, from very respectable authority, of my punctuality and faithful performance of duty in the various situations which I have been called to occupy, and with a heart fraught with grateful recollections of the kindness and affectionate intercourse which I have experienced from my superiors, and from my numerous companions and associates. While I congratulate my country on the momentous event by which we are about to be elevated to the rank of an Independent Nation, most cordially do I proffer my sympathy for the many lives of inestimable value which have been sacrificed during this ever memorable contest."

THE POST-WAR PERIOD

Home from the War in the summer of 1783, Thacher, then twenty-nine years of age, began to think of settling down to his practice, interrupted since the summer of 1775 when the young patriot of twenty-one hurried to Cambridge to join Washington's army lest the War end before he could become a surgeon's mate. Eight years and more was to pass before he could establish himself as a practitioner. The winter of 1783-1784 seems to have been a period of "terminal leave," filled in, no doubt, by a pleasant interlude of courting Susannah Hayward of Bridgewater, a town twenty-five miles to the northwest of Plymouth, whom he was to marry in 1785. One hopes, too, that he paid his respects to Abner Hersey, his eccentric teacher, still in practice in Barnstable. Hersey was to die a few years later at the age of sixty-five, an old man for his day, long worn out by his hard rounds, no doubt made none easier when his young, efficient apprentice left him after five years of training in the fateful July of 1775.

At all events, it was not until March, 1784, that Thacher, well qualified for his time by his good training and extensive war experience, left Barnstable and began his long period of practice in Plymouth. He was to remain for sixty years in the town he loved so well, forty of them as the leading physician of the county and the last twenty, when health partially failed, as a biographer, an antiquarian, farmer, horticulturist, and historian. From 1810 to 1835, nine books were written by Thacher, published in sixteen editions before his death in

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1844, at the age of ninety. One book, the *Military Journal,* was reprinted, with change of title, at least seven times after his death. This was a prodigious output for a country doctor with a large practice. Much was made possible by his semi-retirement at the age of seventy on account of deafness in 1824, but his most important book, the *Military Journal,* was off the press in 1823, when Thacher was also not far from his period of greatest usefulness as a physician and surgeon.

Securely settled in 1784, Thacher married in April of the next year. Of his six children, only two survived him at his death. As his practice grew, young men came to him to learn the art of medicine.[4] They lived in his house as apprentices, but he was more than a master for he taught them medicine in a manner as good as and perhaps even superior to the regular instruction then available in qualified medical schools. Few local boys could afford to leave home for courses offered under John Warren and Benjamin Waterhouse in 1782 at the University at Cambridge, and even fewer could journey to Philadelphia to hear William Shippen and John Morgan, who had begun to teach in 1764. Thacher built his own "school" into his private practice, obtained his dissecting material from a neighboring church-yard, and assembled his own library of English authors, then the only texts available. He soon visualized the importance of books by American physicians and he was among the first in America to write books for the use of his students. In this endeavor he was most successful.

THE MEDICAL WRITINGS OF JAMES THACHER

The first years, from 1784 to 1804, were devoted almost entirely to building up a practice, for Thacher did not join the Massachusetts Medical Society until 1803, presumably too busy to take the long journey to Boston for the annual meeting. But he soon profited greatly by his membership, for the Society issued its *Pharmacopœia* in 1808, a book that completely changed the language of materia medica in this country. Thacher was quick to grasp the importance of the scholarly and safe contribution of John C. Warren and James Jackson, and he hastened to incorporate the essence of the Massachusetts Medical Society *Pharmacopœia* into his first publication, *The American New Dispensatory* (1810). The book, a standard work written in familiar language in concentrated form, was immediately successful, and three additional editions were printed in the following eleven years. The current literature was fully scanned, augmented by the extensive correspondence Thacher must have carried on with physicians in other parts of the country.

Thacher soon discovered that there was no systematic treatise on practical medicine available to his American students other than the standard English textbooks of his times. For years he collected data, particularly on diseases most frequently encountered by him in practice. His *American Modern Practice,* first issued in 1817, placed before the students and practitioners of the country a comprehensive, practical book. His chapters on the "Duties of a Physician" is one of outstanding value in arrangement and full of sound advice. "To excel in the profession of medicine," wrote Thacher, "and to practice with success and reputation, requires indefatiguability, industry, and a vast variety of liberal accomplishments, as well as an understanding improved by knowledge and experience." Surely no one better exemplified than Thacher "indefatiguable industry," "liberal accomplishments," and "understanding improved by knowledge and experience."

A second edition, in 1826, expanded and finely printed, brought the subject up to date and the book was established as the outstanding contribution in its field. Not the least important was the introductory "Historical Sketch of Medical Sciences, and the Sources and Means of Medical Instruction in the United States," assembling all the material related to medical instruction in America up to the time of publication of each of the two editions. This chapter was not only useful at the time but it preserved for medical historians in future times a wealth of factual data and a complete review of medical education as practiced in the early years of the nineteenth century in this country.

In chronological order, between *The American New Dispensatory* (1810) and *American Modern Practice* (1817) came the slightest of Thacher's works, *Observations on Hydrophobia,* issued in Plymouth in 1812. Two patients dying of this disease were seen by Thacher in 1810 and they form the starting point for the book. Their symptoms are well described. The book reflects, moreover, his wide reading, for its condenses most of

the pertinent literature of his day in a series of letters to a friend, leaving, as he writes, "no accessible sources uninvestigated." From the extensive quotations one must conclude that few members of the Massachusetts Medical Society used the library of that organization, established in 1782, more than this country practitioner in Plymouth, although he no doubt had many books in his personal library for the use of his students. Thacher's *Observations on Hydrophobia* serves to illustrate his method of writing. First comes an example of the disease in his practice, then he scans and abstracts all the literature he can find, and finally he puts this material in orderly arrangement and writes a practical book on the subject. In the case of hydrophobia he also suggested more stringent laws to restrain animals already affected.

HORTICULTURE

Coming from farming stock, Thacher never lost his interest in agricultural pursuits. To improve the country and encourage the farmer he wrote a short treatise on apple and other fruit trees, *The American Orchardist,* published in 1822. As on other subjects he read the literature thoroughly, adopting whatever he found in European publications for American needs. He devoted many of his leisure hours to horticulture, and much of the book reflects his own experiences, a form of recreation that to Thacher was a necessity, "Nothing can be more irksome to a reflecting mind," he wrote in the dedication to the officers of the Massachusetts Agricultural Society, "than a state of inactivity and idleness." Although *The American Orchardist* is largely a compilation of the opinions of others, the material is well arranged and the book is a practical guide for the culture and management of fruit trees.

Another publication deals in a similar manner with the care of bees. In this book, *A Practical Treatise on the Management of Bees,* (1829), Thacher gives many examples of his own observations, as well as those of his neighbors.

BIBLIOGRAPHY AND HISTORY

Thacher's name is best known to medical historians through his *American Medical Biography,* a book published in two volumes in 1828. Of particular value is the preface on the "History of Medicine in America," eighty-five pages of closely woven facts and the basis for all subsequent writings on the subject. The biographies are a tribute to Thacher's erudition, a worthy product of his well-disciplined mind and productive antiquarianism.

Towards the end of his life Thacher wrote a brief history of the Salem witchcraft episode, *An Essay on Demonology, Ghosts, and Apparitions* (1831) and a *History of the Town of Plymouth* (1832). The latter passed into a second edition in 1835. Both are written in Thacher's best style, careful compilations of considerable value. To the history of Plymouth he added an important chapter on "The Aborigines or Indian Natives of New England."

SUMMARY

I have dealt largely with Thacher's *Military History* for it is his least known and, to me, his most important writing. The diary reflects his own observations and serves to illuminate the man as well as the times in which he lived. His experiences were not extraordinary, but what he saw he recorded and often commented upon. He, untrained and with a limited education, was a good reporter and his diary can be read with pleasure and profit as well in 1949 as it was in early years of the nineteenth century and throughout the years just prior to the War Between the States. Indeed, the book was so popular from 1854 to 1862 that seven editions were called for. Some printings were so read and used up that only single copies are now found to signify its wide popularity.

After the Revolution Thacher became a physician of more than ordinary distinction, a pioneer in medical education, a writer of note, a practitioner of sterling quality, and a molder of medical thought whose influence has grown with the years, as befits a medical worthy whose name should not be forgotten.[5]

THE PRINCIPAL WRITINGS OF JAMES THACHER

(1) The American new dispensatory. Containing general principles of pharmaceutic chemistry. Pharmaceutic operations. Chemical analysis of the articles of materia medica. Materia medica, including several new and valuable articles, the production of the United States. Preparations and compositions. With an appendix, containing medical prescriptions. The nature and medical uses of the gases. Medical electricity. Galvanism. An abridgement of Dr. Currie's reports on the use of water. The cultivation of the poppy plant, and the method of

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preparing opium. And several useful tables. The whole compiled from the most approved authors, both European and American. 4°. pp. 529.

Boston: Printed and Published by T. B. Wait and Co., 1810.

Notes: Dedicated *To John Warren, M.D.,* Plymouth, January 1, 1810. The *Preface* is dated, Plymouth, January 1, 1810. The Report of a Committee of the Massachusetts Medical Society, consisting of John Warren, Aaron Dexter and Josiah Bartlett, is published as a *Recommendation,* dated Boston, October 14, 1809.

Thacher adopted as a basis for his work the "Pharmacopoeia of Massachusetts," issued by the Massachusetts Medical Society in 1808.

The text ends on p. 389; *Appendix* (pp. 391-457); *Tables* (pp. 459-493); *English and Latin Indexes* (pp. 495-529).

Copyright: May 10, 1810 (Mass.), by Thomas B. Wait and Company.

Copies: MBM, etc.

(1a) ——————— 2 ed. 4°. pp. xxvii, [25]-732.

Boston: Published by Thomas B. Wait and Co., and C. Williams. T. B. Wait and Co., Printers, [1813].

Notes: There is a slight change in the title page. The *Preface to the Second Edition* is dated Plymouth, January 1, 1813. The text is considerably modified and the book is re-set. The text ends on p. 564; *Appendix* (pp. 565-651); *Tables* and *Glossary* (pp. 652-694); *English and Latin Indexes* (pp. 695-732).

Copyright: April 30, 1813 (Mass.) by Thomas B. Wait and Co.

Copies: MBM, etc.

(1b) ——————— 3 ed. 4°. pp. 724.

Boston: Printed and Published by Thomas B. Wait and Sons, 1817.

Notes: The *Preface to the Third Edition* is dated, Plymouth, November 1, 1817. There are changes in the text and the book is re-set.

The text ends on p. 576; *Appendix* (pp. 577-659); *Tables* (pp. 660-690); *English and Latin Index* (pp. 691-724).

Copyright: October 30, 1817 (Mass.), by Thomas B. Wait and Sons.

Copies: MBM, etc.

(1c) ——————— 4 ed. 4°. pp. 736.

Boston: Published by Thomas B. Wait. Joseph W. Ingraham, Printer, 1821.

Notes: The *Preface to the Fourth Edition* is dated, Plymouth, Mass., June 1, 1821. The author notes that parts of the book were printed, without acknowledgment, in another work. The text is changed and the book re-set. *Recommendations* from David Hosack, Lyman Spalding, Wright Post, Valentine Mott and others appear in the preliminary leaves.

The text ends on p. 605; *Appendix* (pp. 606-688); *Tables* (pp. 689-718); *English and Latin Indexes* (pp. 719-736).

Copyright: October 9, 1821 (Mass.), by Thomas B. Wait.

Copies: MBM, etc.

(2) Observations on hydrophobia, produced by the bite of a mad dog, or other rabid animal. With an examination of the various theories and methods of cure, existing at the present day; and an inquiry into the merit of specific remedies. Also, a method of treatment best adapted to the brute creation. In a series of letters addressed to a friend. 4°. pp. (xii), (13)-(302). 1. pl.

Plymouth (Mass.): Published by Joseph Avery, 1812.

Notes: J. Belcher, Printer, Boston. The *Advertisement* is dated, Plymouth, January 1, 1812. The *plate,* showing a species of skull-cap, hand colored, follows p. 214. It is well produced on heavy paper. Some copies are bound in blue boards, uncut. The name of the friend to whom the letters are addressed is not disclosed. *Errata* (p. xii); *Postscript* (p. 302).

Copyright: March 25, 1812 (Mass.), by Joseph Avery.

Copies: MBM, etc.

(3) American modern practice; or, a simple method of prevention and cure of diseases, according to the latest improvements and discoveries, comprising a practical system adapted to the use of medical practitioners of the United States. To which is added an appendix, containing an account of many domestic remedies recently introduced into practice, and some approved formulae applicable to the diseases of our climate. 4°. pp. (2), iv, (3)-744.

Boston: Published by Ezra Read. C. Norris and Co., Printers, 1817.

Notes: The *Preface* is dated, Plymouth, Mass., January 1st, 1817. Introducing the text is an *Historical Sketch of Medical Science, and the Sources and Means of Medical Instruction in the United States.* (pp. 3-66).

The text begins on p. 67 and ends on p. 666; *Appendix* (pp. 667-731); *Errata* (p. 732); *Index* (pp. 733-744).

Copyright: December 30, 1816 (Mass.), by Ezra Read.

Copies: MBM, etc.

(3a) ——————— A new ed., improved. 4°. pp. viii, 976.

Boston: Published by Cottons & Barnard. John Cotton, Printer, 1826.

Notes: The book is dedicated to David Hosack, M.D., Plymouth, May 10, 1826. The text is revised and re-set. Some copies are bound in boards, uncut, with paper or leather label on the back-strip.

The *Historical Sketch* is brought up to date to include the first few months of 1826 and late changes are added on p. 785.

The text ends on p. 748; *Appendix* (pp. 749-785); *Errata* (p. 786); *Index* (pp. 787-796).

Copyright: September 16, 1826 (Mass.), by Cottons and Barnard.

Copies: MBM, etc.

(4) The American orchardist; or a practical treatise on the culture and management of apple and other fruit trees, with observations on the diseases to which they are liable, and their remedies. To which is added the most approved method of manufacturing and preserving cider. Compiled from the latest and most approved authorities, and adapted to the use of American farmers. 4°. pp. [viii], [9]-226.

Boston: Printed and Published by Joseph W. Ingraham, 1822.

Notes: The book is dedicated *To the President and other officers of the Massachusetts Agricultural Society,* Plymouth, July, 1821. *Recommendation* by Aaron Dexter, M.D., and others. *Errata* (p. viii). *Index* (pp. 219-226). Boards; paper label.

Copyright: January 3, 1822 (Mass.), by Joseph W. Ingraham.

Copies: MBM, etc.

(4a) The American orchardist; or, A practical treatise on the culture and management of apple and other fruit trees, with observations on the diseases to which they are liable, and their remedies. To which is added the most approved method of manufacturing and preserving cider, and also wines from apple juice and currants. Adapted to the use of American farmers, and all lovers and cultivators of fine fruit. 2 ed., improved much. 4°. p. 236.

Plymouth, Mass.: Published by Ezra Collier, 1825.

Notes: The title is slightly changed in the second edition and the book is revised, re-set and printed by Allen Danforth in Plymouth. There is a new *Preface,* dated, Plymouth, October, 1825. *Index* (pp. 229-236).

Copyright: October 24, 1825 (Mass.), by Ezra Collier.

Copies: MBM, etc.

(5) A military journal during the American Revolutionary War, from 1775 to 1783, describing interesting events and transactions of this period, with numerous historical facts and anecdotes, from the original manuscript. To which is added an appendix, containing biographical sketches of several general officers. 4°. pp. viii, [9]-603.

Boston: Published by Richardson and Lord. J. H. A. Frost, printer, 1823.

Notes: The *Dedication* is to John Brooks, Governor of Massachusetts, dated, Plymouth, January 1st, 1823. The *Military Journal* (pp. 9-390) covers the period January, 1775 through December, 1782. Consideration of the events of 1783 is given in the *Revolutionary Annals* (pp. 391-434). The *Appendix* contains notes (pp. 435-484) and Biographical Sketches (pp. 485-593). *Contents* (pp. 595-603). No index.

Copyright: May 17, 1823 (Mass.), by Richardson and Lord.

Copies: MBM, etc.

(5a) ———————— 2 ed., revised and corrected. 4°. pp. viii, 11-487, 1 (advt.).

Boston: Published by Cottons & Barnard. John Cotton, printer, 1827.

Notes: The text is revised and re-set. The preliminary leaves contain a letter from John Adams, dated Quincy, 11th September, 1824, in praise of the book. *Military Journal* (pp. 11-316); *Revolutionary Annals* (pp. 317-345); *Appendix* (pp. 347-477); *Contents* (pp. 479-487); No index. The advertisement of Cottons and Barnard is on the last leaf. Some copies are in boards, uncut, with paper label on the back-strip. Some copies have attached label on title-page—London: R. J. Kennett, 59 Great Queen Street.

The best edition, corrected by the author and issued under his direction.

Copyright: March 10, 1827 (Mass.), by Cottons and Barnard.

Copies: MB, etc.

(5b) *Military Journal,* during the American Revolutionary War, from 1775 to 1783; describing the events and transactions of this period, with numerous historical facts and anecdotes. To which is added, an appendix, containing biographical sketches of several general officers. 8°. pp. 494, [5] (advt.) pls., ports.

Hartford: Silas Andrus & Son. 1854.

Notes: A cheap reprint of the 1823 edition, with poor plates and portraits. Foundry of Silas Andrus & Son, Hartford. W. C. Armstrong, Typographer. Steam press of W. S. Williams. The note on the foundry and steam press is inverted on the back of the titlepage. Single line around titlepage and text. *Military Journal* (pp. 7-326); *Revolutionary Annals* (pp. 327-356); *Appendix* (pp. 357-486); *Contents* (pp. 487-494). No index.

Bound in law leather. The backstrip is lettered: *American Revolution. Thacher.*

Copyright: None.

Copies: MBM, etc.

(5c) Military journal of the American Revolution, from the commencement to the disbanding of the American Army; comprising a detailed account of the principal events and battles of the Revolution, with their exact dates, and a biographical sketch of the most prominent generals. To which is added the life of Washington, his Farewell Address, the Declaration of Independence and the Constitution of the United States. 8°. pp. xiv, [7]-618. 8 colored pls., 24 ports., frontispiece and 4 engraved pls.

Hartford, Conn.: Published by subscription only by Hurlbut, Williams & Company, American Subscription Publishing House, 1862.

Notes: An expanded edition, re-set and printed by Williams, Wiley and Turner. R. H. Hobbs, stereotyper. The text of the 1823 edition is used. The plates are superior to those in the 1854 edition. *Preface* (pp. v-vi); *Contents* (pp. vii-xiv); *Military Journal* (pp. 7-326); *Revolutionary Annals* (pp. 327-356); *Appendix* (pp. 357-486); *Washington* (pp. 487-515); *Fare-*

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well Address (pp. 516-526); *Declaration* (pp. 527-609); *Constitution* (pp. 610-618). No index.

Bound in purple cloth, with elaborate gold stamp. The backstrip is lettered: *Thacher's American Revolution,* without dates.

Copyright: 1861 (Conn.), by Hurlbut, Williams & Co.

Copies: MBM, etc.

(5d) The American revolution, from the commencement to the disbanding of the American army; given in the form of a daily journal, with the exact dates of all the important events; also, a biographical sketch of all the most prominent generals. Published by subscription only. 8°. pp. xiv, 7-486. 7 colored pls., 24 ports.

Cincinnati: Published by Mack R. Barnitz, No. 40, West Fourth Street, [1856].

Notes: A reprinting of the text of the 1823 edition. The text-plates of the Hartford, 1854, edition are used, with added signature numbers and with a double line around text and titlepage. The Foundry and Press are not indicated. The *Dedication* and *Introduction* of the 1823 edition are omitted and a new *Preface* substituted. The *Contents* is retained and precedes the text. The portraits and hand-colored plates differ from the preceding editions.

Bound in green cloth, with elaborate gold stamp. The backstrip is lettered: *Thacher's American Revolution from 1775 to 1783.*

Copyright: 1856 (Ohio), by Mack R. Barnitz.

Copies: DLC (only copy found).

(5e) ——————— 8°. pp. xiv, 7-486. 7 colored pls., 24 ports.

Cincinnati: Published by Mack R. Barnitz, No. 40, West Fourth Street, [1857].

Notes: A re-issue of the [1856] edition, with same titlepage, but with change in copyright.[6]

Copyright: 1857 (Conn.), by L. Stebbins.

Copies: NN (only copy found).

(5f) ——————— 8°. pp. xiv, 7-486. 7 colored pls., 24 ports.

Cincinnati, Ohio: Published by Mack R. Barnitz, 38 and 40 West Fourth Street, 1859.

Notes: A re-issue of the [1856] edition, with dated titlepage. Steam press Williams and Wiley.

Copyright: 1856 (Ohio), by Mack R. Barnitz.

Copies: M, MBM, MiU, Viets.

(5g) ——————— 8°. p. 486. 7 colored pls., 24 ports., frontispiece.

New York: American Subscription Publishing House, 1860.

Notes: A re-issue of the [1856] edition, with dated titlepage and engraved frontispiece. R. H. Hobb, Stereotyper. Williams and Wiley, printers.

Copyright: 1859 (Conn.), by Lucius Stebbins.

Copies: ICN, MH, NNN, CtY-M, RPB.

(5h) ——————— 8°. pp. xiv, 7-486. 8 colored pls., 24 ports., frontispiece.

Hartford, Conn.: Hurlbut, Kellogg, & Co., American Subscription Publishing House, 1861.

Notes: A re-issue of the [1856] edition, with dated titlepage and engraved frontispiece. R. H. Hobbs, stereotyper. Williams and Wiley, printers. A new colored plate is added to the 7 found in previous editions.

Copyright: 1860 (Conn.), by Hurlbut, Kellogg, & Co.

Copies: Ct, DLC, ICHi, MWA, MWHi, N, NNC, OC, OClWHi, PP.

(6) American medical biography: memoirs of eminent physicians who have flourished in America. To which is prefixed a succinct history of medical science in the United States, from the first settlement of the country. 2 vols. in 1. 4°. pp. 436; 280. ports.

Boston: Richardson & Lord and Cottons & Barnard, 1828.

Notes: The book is dedicated to Edward Augustus Holyoke, M.D., dated Plymouth, Mass., January 1, 1828. The *Preface* carries the same date. The *History of Medicine* (pp. 9-85) is an expanded version of the *Historical Sketch of Medical Science,* first published in "American modern practice," 1817 and enlarged in the second edition of 1826. This account contains further revisions. The book is well printed and the lithographed portraits excellent. Copies in boards, uncut, with paper label on the backstrip are known.

Copyright: February 13, 1828 (Mass.) by Richardson & Lord and Cottons & Barnard.

Copies: MBM, etc.

(7) A practical treatise on the management of bees; and the establishment of apiaries, with the best method of destroying and preventing the depredations of the bee moth. 6°. pp. 162 [4].

Boston: Marsh & Capen. Press of Dow and Niles, 1829.

Notes: The *Advertisement* is dated, Plymouth, November 1828. The *Appendix* (pp. 127-149) is taken from an article by Mrs. Mary Griffith, of New Brunswick, N. J.; *Postscript* (pp. 150-152); *Analytical Index* (pp. 153-162); *Contents* (p. 163); *Errata* (p. 164). The advertisement of Marsh & Capen is on pp. 165-166; Thacher's "American Orchardist" is offered for $1.00.

Copyright: December 30, 1828 (Mass.), by Marsh & Capen.

Copies: MBM, etc.

(8) An essay on demonology, ghosts and apparitions, and popular superstitions. Also, an account of the witchcraft delusion at Salem, in 1692. 6°. pp. vi, 234.

Boston: Carter and Hendee, MDCCCXXXI.

Notes: Printed by Boston Classic Press. I. R. Butts. The *Advertisement* (pp. iii-iv) is dated, Plymouth, Nov. 1831. *Salem witchcraft* (pp. 113-204); *Medical Quackery* (pp. 225-234). Binding: red buckram; paper label.

Copyright: 1831 (Mass.), by Carter and Hendee.

Copies: MBM, etc.

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(9) History of the town of Plymouth; from its first settlement in 1620, to the year 1832. 6°. p. 382. pl., map. Boston: Marsh, Capen & Lyon, 1932.

Notes: Waitt and Dow's Press. The *Preface* is dated Plymouth, July 4, 1832. *Frontispiece,* New Church; *Index* (pp. v-xi); *Errata* (p. xii). The text begins on p. 13. Bound in purple cloth.

As noted in the *Preface* to the second edition (1835), the whole of this edition, consisting of 1250 copies, was disposed of within a few months after publication.

Copyright: 1832 (Mass.), by Marsh, Capen, and Lyon.

Copies: MH, etc.

(9a) History of the town of Plymouth, from its first settlement in 1620, to the present time: with a concise history of the aborigines of New England, and their wars with the English, &c. 2 ed., enlarged and corrected. 6°. pp. 401. fold. map.

Boston: Marsh, Capen & Lyon, 1835.

Notes: The book is revised and re-set. The *Preface* is dated, Plymouth, Sept. 1st, 1835. *The aborigines or Indian natives of New England* occurs on pp. 353-401. The *Contents* (pp. [v]-15) serve as an index. In this edition the map is redrawn and improved. The frontispiece is omitted.

Copyright: 1835 (Mass.), by Marsh, Capen & Lyon.

Copies: MBM, etc.

ABBREVIATIONS FOR LIBRARIES

Ct.	Connecticut State Library, Hartford.
CtY-M.	Yale University, New Haven. Medical School.
DLC.	Library of Congress.
ICN.	Newberry Library, Chicago.
ICHi.	Chicago Historical Society.
M.	Massachusetts State Library, Boston.
MB.	Boston Public Library.
MBM.	Boston Medical Library.
MH.	Harvard University, Cambridge.
MWA.	American Antiquarian Society, Worcester.
MWHi.	Worcester Historical Society.
MiU.	University of Michigan, Ann Arbor.
N.	New York State Library, Albany.
NN.	New York Public Library.
NNC.	Columbia University, New York.
NNN.	New York Academy of Medicine.
OC.	Cincinnati Public Library.
OClWHi.	Western Reserve Historical Society, Cleveland.
PP.	Free Library, Philadelphia.
RPB.	Brown University, Providence.

ORDER OF THACHER PUBLICATIONS

1.	The American new dispensatory.	Boston, 1810.
1.a.	——— 2 ed.	Boston, [1813].
1.b.	——— 3 ed.	Boston, 1817.
1.c.	——— 4 ed.	Boston, 1821.
2.	Observations on hydrophobia.	Plymouth, 1812.
3.	American modern practice.	Boston, 1817.
3.a.	——— 2 ed.	Boston, 1826.
4.	The American Orchardist.	Boston, 1822.
4.a.	——— new ed.	Plymouth, 1825.
5.	A military journal.	Boston, 1823.
5.a.	——— 2 ed.	Boston, 1827.
5.b.	Military journal.	Hartford, 1854.
5.c.	———	Hartford, 1862.
5.d.	The American revolution.	Cincinnati, [1856].
5.e.	———	Cincinnati, [1857].
5.f.	———	Cincinnati, 1859.
5.g.	———	New York, 1860.
5.h.	———	Hartford, 1861.
6.	American medical biography. 2 vols.	Boston, 1828.
7.	A Practical Treatise on . . . bees.	Boston, 1829.
8.	An essay on demonology.	Boston, 1831.
9.	History of the town of Plymouth.	Boston, 1832.
9.a.	——— 2 ed.	Boston, 1835.

REFERENCES

1. The manuscript of the original diary has not, so far as known, been preserved. First published in 1823, forty years after the close of the War in 1783, the text may have been rewritten and considerably modified by the author in the intervening years. The diary, however, has the freshness of an original document in spite of its late publication. The second, and best edition, revised by Thacher, was issued in 1827. There were many subsequent editions based on the text of the first, 1823, printing. Thacher was a mature man, sixty-nine years of age, when the *Journal* was first published.

2. All references refer to the second edition of *A Military Surgeon,* Boston, 1827.

3. The spelling of Skeensbury has been left as Thacher wrote it. He later referred to the place of rendezvous as Skeenesborough. It is now known as Whitehall, a name adopted in 1786.

4. Noted in a biography of Thacher, in manuscript, by his daughter, Betsy Hayward Thacher (1786-1871), now in the Boston Medical Library. She wrote: "Being so well qualified as an instructor in medicine my Father has educated more young gentlemen in the medical profession than all the other physicians in the old colony. They are scattered through the United States and many of them are ornaments to the profession."

5. There is no full-length biography of Thacher. The most extensive sketch of his life will be found in the *Dictionary of American Biography* (1936). Many letters, as yet unedited, are in the Boston Medical Library.

6. In the catalogue of the F. S. Hoffman Sale, held on March 19, 1877, in New York, an edition of the *American Revolution,* New York, 1857, was offered as item #4701. No such edition has been located or any other reference to it, except in Sabin (95148), where the Hoffman copy is noted, without further assignment. This might be the "third edition of which I find is to be published by the Harpers of New York, revised by his grandson, Mr. James F. Hodge" of New York. (S. W. Williams *American Medical Biography.* Greenfield, Mass. 1845. p. 567).

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THE VARIABLE CLINICAL MANIFESTATIONS OF SICKLE CELL ANEMIA*

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and
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The frequency with which the correct diagnosis of many diseases is made usually parallels the physician's experience with the particular condition or his index of suspicion toward such an illness. Sickle cell anemia, because of its protean manifestations and its ability to simulate other diseases, is too often overlooked and not diagnosed due chiefly to the fact that the physician has not thought of it. It is the purpose of this paper to stress some of the unusual clinical features of sickle cell anemia and at the same time to emphasize its ability to simulate closely the clinical picture of many unrelated diseases.

The case records of ninety-two (92) patients with sickle cell anemia observed in the hospitals of the Medical College of Virginia have been reviewed. These cases have been studied with special regard to their presenting complaints, initial diagnoses and physical findings which simulated other pathologic states.

Since few cases of sickle cell anemia present themselves for treatment or observation while in the inactive stage, it is during the crisis of the disease that most patients are seen. It is this feature of sickle cell anemia that causes its bizarre and confusing clinical manifestations.

During the period of crisis most cases have in common a temperature elevation, anemia and leucocytosis. Beyond this common ground, however, the symptoms and findings vary as widely as seems possible for a single pathologic state, and still be considered a disease entity. They may simulate diseases of all of the body systems and in the patients reported here the following group of symptoms appeared. Forty-seven (47) patients had symptoms referable to the skeletal system. Forty-two (42) had symptoms or findings pointing to the cardiovascular system, while thirty-five (35) cases simulated some disturbance of the gastro-intestinal tract. Jaundice was present in twenty-one (21) patients and nineteen (19) had genito-urinary symptoms. Eighteen (18) patients were thought to have rheumatic fever either in the past or at the time of hospitalization. Central nervous system symptoms occurred in eighteen (18), systemic infections in fourteen (14), and respiratory symptoms in twelve (12). Eight (8) patients had an abnormal obstetrical history.

With such a wide variety of presenting symptoms and findings it is natural that a great number of extraneous diagnoses be made before the true state of affairs is recognized. In the ninety-two (92) patients studied in this group the following diagnoses appeared as the original impression or were considered as reasonable possibilities at some time during the period of observation. (Chart 1.)

CHART 1.
The Various Diagnoses Made Initially on 92 Patients Entering the Hospital in Sickle Cell Crises.

Respiratory System	*Cardiovascular System*
Pneumonia	Rheumatic Heart Disease
Tuberculosis	Rheumatic Pancarditis
Miliary Tuberculosis	Congenital Heart Disease
Whooping Cough	Bacterial Endocarditis
	Thrombophlebitis
Hemopoetic System	*Central Nervous System*
Leukemia	Brain Tumor
Infectious Mononucleosis	Meningitis
Hodgkin's Disease	Encephalitis
Congenital Hemolytic Anemia	Poliomyelitis
Banti's Disease	Epilepsy
Amyloidosis	Hypopituitarism
	Central Nervous System Syphilis
Skeletal System	*Systemic Infections*
Rheumatic Fever	Typhoid Fever
Rheumatoid Arthritis	Tularemia
Acute and Chronic Osteomyelitis	Typhus Fever
	Influenza
Syphilitic Periostitis	Syphilis
Scurvy	Undulant Fever
Abdominal and Gastro-intestinal System	
Acute Appendicitis	Catarrhal Jaundice
Perforated Viscus	Acute Hepatitis
Intestinal Obstruction	Acute Gastroenteritis
Pyosalpinx	Intestinal Parasites
Acute Cholecystitis	Bacillary Dysentery
Cholelithiasis	Ovarian Tumor

*Read at the annual meeting of the Medical Society of Virginia, in Richmond, October 18-20, 1948.

**Associate in Medicine, Medical College of Virginia.
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Past History: Most of the patients examined in this series gave a fairly characteristic history. They had been underweight, undersized and in poor health from birth. Their illnesses usually consisted of repeated episodes of muscle and joint pains, abdominal cramps, bouts of fever, leg ulcers and often their parents had noted jaundice. The muscle and joint pains associated with fever frequently led to a diagnosis of rheumatic fever and it was not uncommon to find patients who had been confined to bed for months at a time because of this mistaken diagnosis. Miscarriages occurred often in the women patients and in this series eight of the eleven who had been pregnant had been unable to complete their period of gestation. One of these patients had had five abortions.

Unfortunately, all patients were not questioned closely about precipitating causes of their crisis. Twenty (20) did associate upper respiratory infections with the onset of acute symptoms, three (3) felt that exposure to cold damp weather brought on an exacerbation of their illness and one (1) patient definitely related her attacks to the onset of her menstrual periods.

General Physical Examination: All patients in this series were young negroes, underweight, undersized and often appearing poorly nourished. The temperature was uniformly elevated when seen in a crisis, usually varying from 100-101° F., but often reaching a height of 103-104° F. The skin and mucous membranes were pale and at times the sclerae had an icteric tinge. Many patients presented the peculiar physical features of longstanding sickle cell disease with short trunks, long extremities and long tapering fingers.

Cardiovascular Manifestations: The heart is one of the most interesting features of the sickle cell anemia patient and until recently had not received sufficient attention. In the past the heart in sickle cell anemia had too often been incorrectly classified as a rheumatic heart. In truth, the two conditions rarely, if ever, exist together and only three such cases have been reported.

In fifty-four (54) of the patients in this group the heart was enlarged. Apical systolic murmurs were present in 63% of the cases, while murmurs over other areas of the heart were less common. The past history of fever, muscle and joint pain and the findings of an enlarged heart with persisting apical murmurs frequently encountered in these patients necessarily suggests the diagnosis of organic heart disease in many patients with sickle cell anemia. Thirty-nine (39%) per cent of this group were at one time diagnosed as rheumatic heart disease and three (3%) per cent as congenital heart disease. No case under our observation was found to have either type of heart disease at autopsy. Four (4) cases were in congestive failure.

Another vascular finding in sickle anemia of interest are the changes in the retinal vessels. These consist of marked tortuosity of the retinal veins without associated changes in the arteries or optic disc.

Abdominal and Gastro-Intestinal Manifestations: Thirty-five (35) of the cases entered the hospital complaining of abdominal pain or with symptoms suggesting some lesion of the gastro-intestinal tract. These symptoms in part consisted of nausea, vomiting, and severe cramping pains often generalized, but frequently localized to one of the abdominal quadrants. Diarrhea was present in some instances and occasionally generalized abdominal distention occurred. On examination generalized or local tenderness might be present and frequently muscular spasm or rigidity of the abdominal wall was a definite finding. An enlarged liver was found in thirty-seven (37) cases and the spleen was enlarged in twenty (20).

The most disturbing feature of the abdominal and gastro-intestinal symptoms was the fact that the pain, tenderness and rigidity associated with the temperature elevation and leucocytosis very frequently led to the suspicion of a surgical abdomen. Six cases were thought to have an acute appendicitis, one an acute intestinal obstruction and one a ruptured viscus. Incidentally, two patients were found on x-ray examination to have gall stones, a finding in common with other types of hemolytic anemias.

Skeletal Manifestations: Muscle, joint and extremity pain is a very common complaint and was the outstanding symptom in forty-seven (47) patients. Occasionally actual swelling of the joint with increased heat may be present or may have actually occurred in the past. On close questioning, however, it is usually found that the pain has been more general over the muscles and long bones rather than being localized to the joint areas.

Because of the frequently repeated attacks of extremity pain associated with a temperature eleva-

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tion and leucocytosis, rheumatic fever was considered as the most likely diagnosis in eighteen (18) patients and many of these had been treated for this condition over a period of months or years before entering the hospital. Of especial importance in differentiating sickle cell anemia crisis from rheumatic fever is the fact that the sedimentation rate in sickle cell anemia is usually not increased. Ten (10) of the patients were thought to have rheumatoid arthritis, one (1) was diagnosed as luetic periostitis and one (1) was believed to have scurvy because of the appearance of severe malnutrition associated with the skeletal pain. Thirteen (13) cases had open leg ulcers at the time of admission and many others showed evidence of having had old healed lesions.

Twelve (12) cases had osteomyelitis of either an acute or chronic nature, which appeared to be a surprisingly high incidence and apparently had not been previously emphasized as a feature of the disease.

Respiratory Manifestations: Nine (9) patients were found to have bronchopneumonia and two (2) were suspected of having pulmonary tuberculosis. Three (3) patients entered the hospital because of uncontrollable nose bleed.

Central Nervous System Manifestations: Five (5) patients had signs of an acute meningitis, four (4) had had convulsions, three (3) were ataxic and three (3) were stuporous or comatose. One (1) patient, even after repeated examinations, was suspected of having a brain tumor.

Genito-Urinary Manifestations: An interesting complaint in fifteen (15) patients was that of polyuria and in six (6) of these there was an associated polydypsia. Four (4) cases in the total group entered the hospital because of persistent and painful priapism.

Laboratory and Special Studies: The diagnosis in sickle anemia crisis, though suspected from the history and physical examination of the patient, is made only on the basis of special studies of the blood. A moderately thick smear of peripheral blood is made on a cover slip; this is then mounted face down on a slide and then rimmed with vaseline. A few abnormal changes in the red cells may be noted within a few minutes, but the striking changes usually take from two to six hours to develop and on occasion twenty-four hours is required before adequate sickling takes place. Incubating the slide or placing it in a CO_2 chamber may hasten the process. The process of sickling first begins with a thickening of one side of the red cell with a corresponding thinning of the other side. The diameter of the corpuscle then becomes greater and finally the red cell becomes a bizarre and curved structure with elongated and pointed filaments.

Anemia is always present during a sickle cell crisis and may be severe with the red cell count as low as one to two million cells per cu. mm. The white blood cells are increased from fifteen to forty thousand per cu. mm. and normablasts are often present. If special techniques are used, reticulocytes may be found in quantities of from 5 to 25 per cent. Interestingly enough, the sedimentation rate is not increased even when the anemia is marked, due probably to the fact that the abnormal shape of the cells prevents rouleaux formation.

There is a slight increase in the icterus index, not usually over 30 units, and the Van den Bergh reaction is indirect.

The urine contains an increased quantity of urobilinogen and the specific gravity is usually low and fixed, indicating tubular damage to be expected with increased blood destruction.

Roentgen changes of note may appear in the skull, the vertebrae or in the long bones. The earliest changes in the skull is the development of a general opacity with a "ground-glass" appearance. Later a peculiar radial striation appears with the trabeculae arranged perpendicular to the inner table and producing a "hair-on-end" appearance. Osteosclerosis, cortical thickening, and new bone formation within the medullary cavity of long bones is often seen and sometimes leads to such diagnosis as luetic periostitis, scurvy and the like. Osteoporosis and flattening of the vertebral bodies may be present.

DISCUSSION

From this study of ninety-two cases of sickle cell anemia it can be seen that its clinical manifestations are many and varied, both in history and physical findings. The diagnosis is relatively easy if only it is considered. One could almost say that it should be considered in every negro patient who is acutely ill and who is severely anemic regardless of his complaint or physical finding.

The high incidence of cardiac changes occurring in sickle cell disease is worthy of some comment. Not only in sickle cell anemia, but in other severe anemias, the heart usually undergoes

certain physiologic changes. It first dilates, probably due to myocardial ischemia. The cardiac output and pulse increase and the circulation time lessens. In time, if the anemia is not improved, the heart hypertrophies. This latter change is a permanent one, whereas in the dilated heart of a relatively short standing anemia the size will decrease if the anemia is corrected. This work was graphically pointed out by Porter, who used patients with the chronic anemia of hookworm disease and found the heart size returned toward normal when the patient was rid of his infestation and the hemoglobin began to climb. Those patients who had had the disease many years developed an irreversible cardiac hypertrophy in spite of treatment. A similar circumstance occurs in the heart with sickle cell anemia.

The complaints of polyuria and polydypsia occurred just often enough in our cases to arouse our suspicions. We have not yet had opportunity to make renal function studies on the patients and only could observe the reported urinary specific gravity to be almost universally low, i.e. between 1.006 and 1.016. Whether those observations are significant we are not yet able to say.

The incidence of osteomyelitis seemed to be slightly higher in our cases than one could explain by coincidence. The relation here bears further study.

The almost inevitable abortion of the pregnant patient with sickle cell anemia has never adequately been explained. Kimmelsteil just recently suggested a new idea as to the cause of the frequent thrombotic phenomenon which occur in the spleen, lungs, kidneys, and brain of these patients. He believes that the ischemia caused by the low oxygen carrying capacity of the sickled red blood cell causes vascular spasms which in turn encourage thrombus formation. Conceivably, if this is true, similar vascular changes may occur in the pregnant uterus of the patient with sickle cell anemia and an abortion ensues.

SUMMARY

In summary, then, one could justifiably add sickle cell anemia to Osler's dictum that to know syphilis is to know other diseases. Sickle cell anemia is a great imitator. Ninety-two cases of this disease occurring in the Medical College of Virginia Hospitals over a ten-year period bear this out. The wide variation of the presenting complaints, the physical findings and numerous different diagnoses of these patients should in itself emphasize the possibility of sickle cell anemia in almost all acutely ill, young, negro patients.

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Medical Arts Building.

DISCUSSION

DR. JAMES P. BAKER, White Sulphur Springs, W. Va.: Dr. Higgins and Dr. Toone have given a very complete picture of the clinical manifestations of sickle cell anemia. The ninety-two (92) patients, whose case histories they studied, presented a variety of symptoms and signs such as is found in few diseases.

Yet, this is a comparatively new disease, one that has been accorded very little attention. The first case on record was reported by Herrick in 1910. The second case ever to be described was written up in the *Virginia Medical Semi-Monthly,* the precursor of the journal published by this Society, in 1911. The author of this second paper was Dr. B. E. Washburn, who was then a senior medical student at the University of Virginia. There were only two other cases described in the ensuing 12 years, with the result that it was considered a rare disease. Since the early 1920-s, so many cases have been reported that it has come to be regarded as quite a common disease. The authors of the paper we have just heard did not state how many years were covered by their report, but I am sure that practically all their patients were diagnosed during the past twenty years. I am sure, too, that many patients afflicted with this disease die in infancy or early childhood without being recognized.

We know mighty little about the origin of sickle cell

anemia. Inasmuch as it is confined almost exclusively to the negro race, it probably existed in those parts of Africa from which our negro population derived. As far as I know, however, only one case has been reported from Africa. It would be most interesting to search for this disease among the peoples who inhabit the western part of equatorial Africa.

Unlike the cells in congenital hemolytic icterus, the red cells in sickle cell anemia are more resistant than normal to hypotonic saline. It has been suggested that trauma in the circulation may be a factor. Some years ago we demonstrated this possibility by comparing the amount of hemolysis in normal and sickled bloods which were shaken in flasks with glass beads. Similar observations were made by Diggs and Bibb.

Why do such patients have crises of hemolysis, and symptoms referable to almost every system of the body? From the findings of other investigators, and our own observations, we can suggest mechanisms that may be responsible. When one considers the size and shape of the sickled erythrocytes it is easy to see how they might cause stasis of blood flow through capillaries, even blocking capillaries. Anoxemia resulting from such stasis would accentuate the deformity of cells. This vicious cycle of stasis, anoxemia, further sickling and stasis probably results in vascular injury with thrombosis. If the thrombus be of sufficient size and collateral circulation be inadequate, destruction of tissue will occur. It is probable that this same stasis, with trauma to deformed cells, is responsible for the excessive hemolysis.

DR. TOONE, closing the discussion: In answer to Dr. Baker's question, this study covered a period of five years. I might add, though, that the incidence of sickle-cell anemia would probably have been smaller some fifteen to twenty years ago because our index of suspicion has risen quite a bit at the Medical College in recent years.

There is one point I wish to stress again. That is that sickle-cell anemia offers a very bizarre, and very confusing clinical picture; but it may be diagnosed readily by a simple laboratory procedure. The whole trick seems to be in thinking about the disease and requesting that the particular test be made. Unfortunately, it is not a test that is done routinely.

Although the treatment of this disease is far from being satisfactory, it is still very important that a correct diagnosis be made as promptly as possible. Otherwise, many patients might be treated erroneously over a long period of time for one or several of the conditions mentioned which are frequently mistaken for sickle-cell anemia.

I wish to thank Dr. Baker for his discussion.

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The author is described by Spencer as anatomist and man-midwife. Douglas' pouch is named after him. He was a brother of John Douglas (-1759) the lithotomist who also wrote *A Short Account of the State of Midwifery in London* etc., 1736.

THE RECOGNITION OF PRE-SCHIZOPHRENIC STATES*

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and
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The ambition of the authors of this short study is threefold: first, to show why the precursors of schizophrenia should be of interest to all medical men; second, to present situations and deviations in behavior that have been found by others and by us to occur in persons who later develop the disease; and, third, to suggest something of a diagnostic profile which would sound the alarm calling for immediate and continued action to prevent the disorder. Methods for the suggested action will also be briefed.

Leland E. Hinsie, writing in *Psychoanalysis of Today*,[1] describes schizophrenia as a way of life which individuals adopt, perhaps for many causes. He believed that it developed from its precursor, schizoidism. He designated as schizoid that "type of person who lives essentially within himself, who shuns reality for reverie. He is an introvert, loosely connected with members of his family, and affiliated, if at all, with extra-familial activities. He is emotionally selfish, or as we say pre-eminently narcissistic, self-loving. He cannot abandon the center of the infantile stage in favor of later integrated behavior."

Schizophrenia, a form of faulty adaptation, was first recognized as unitary in structure by Kraepelin. He collected under the term dementia praecox many species of reaction characterized by what seemed to him to be deterioration in young adults. Later Bleuler applied the term schizophrenia to the reaction because of abnormalities in the emotional reaction which he deemed important. The name has held since. Now, however, emphasis is placed on the bio-social character of the disease. It is known to be a disorder which can occur at any time of life from childhood to old age. It seems to be based on physiological and anatomical inadequacies, but is brought into being by difficulties with inter-personal relationships. The reaction is characterized by use by the personality of two mechanisms of defense, one withdrawal, and the other fantasy, two types of behavior which become habitual, thus leading their victim on into a lonesome life in a community constructed by himself to meet his needs.

This abnormal type of human behavior is frequent in its occurrence. It constitutes about 20% of admissions to mental hospitals all over the world. Table No. I taken from the work of Leopold Bellak

TABLE I

Dementia Praecox	22.3
Psychoses with Cerebral Arteriosclerosis	22.0
Senile	13.2
Alcohol	5.9
General Paresis	5.3
Manic-Depressive	4.4

entitled *Dementia Praecox*[2] gives the leading groups of first admissions to the New York civil state hospitals per 100,000 general population in 1943. Table No. II taken from the same work shows first and readmissions in residence in September, 1940, by diagnosis and percentage distribution from the

TABLE II

	First Admission	Readmission
Dementia Praecox	47.4	56.1
Cerebral Arteriosclerosis	8.1	2.2
Mental Deficiency	7.7	8.4
Alcoholic	5.9	4.6
Manic-Depressive	5.6	10.7
Senile	4.5	.8
Convulsive Disorders	3.7	4.1
Syphilitic Meningoencephalitis	3.7	2.1
Involutional	3.4	2.1
Paranoia	3.1	2.8
Psychoneuroses	.9	1.0
Psychopathic Personality	.7	1.5
Without Psychoses	.7	.5
Other Forms of Syphilis	.7	.3
Other Metabolic Diseases	.6	.2
Epidemic Encephalitis	.3	.3

Annual Report of Mental Health for the year ending November 30, 1940, East Gardner, Massachusetts. Every fourth or fifth hospital bed in this country is occupied by a case of schizophrenia. The disease strikes in early adult life as a rule, the median age of onset around 25 years of age. The

*Read before the annual meeting of the Medical Society of Virginia, in Richmond, October 18-20, 1948.

victims are totally disabled and are usually unable to produce from then on[3]. The average age of death is 55.8 years, according to the New York report of 1943[4]. Some authors feel that for every schizophrenic in a hospital, there is another living in the community, either partially crippled but able to get along, or totally incapacitated, yet kept in the home by the family. Certainly there are a great many people living in the community who are either incipient schizophrenics or about to become victims of the disease. The number of persons now in the state hospitals of Virginia with this disease is 3,279; the admissions were 501. The number of patients with that diagnosis which were admitted to the University Hospital last year was 86. These and many other reasons indicate that the prevention of this disease should be the concern of all physicians.

Frequent studies have been made on the prodromata of this condition. The need to screen out the potential victim of schizophrenia has been emphasized by the experiences of the last war. Tests as well as other techniques for recognition of future victims have been suggested for use when examining draftees. Shock therapies of different kinds during the last decades have changed the concepts regarding treatment, and have placed the emphasis on early diagnosis, since treatment in the disease in its incipiency has a better prognosis. Also of late many mild cases of schizophrenia have been recognized that are short-lived and get well. It is felt too that many cases of the disease are mistreated during the mild stage because of faulty diagnosis. Therefore, medical men have sought for the criteria of early recognition. Finally, recent emphasis in the public schools for treatment of the tendency to withdraw as represented by the shy child by means of special classes has stimulated the search for preschizophrenic characteristics which can be eliminated.

Early recognition, according to Hinsie, as stated above, would follow the recognition of schizoidism, as he calls it. "D. E. Cameron differentiates nonspecific early symptoms and specific schizophrenic symptoms. The former, the non-specific or prodromata, he divides into the hyper-active pattern characterized by anxiety and worry, and a hypo-active group characterized by day-dreaming and loss of interest in the world. The more specific early schizophrenic symptoms he subdivides into ideational references, such as the feeling of being talked about, watched, doped, etc., and experiences, such as being dazed, dizzy and other vague somatic references."[5]

Potatin and Hoch find the existence of schizoid or schizophrenic individuals in the family, traits associated with introversion, mood fluctuations, and free floating anxiety as important indicators; fatigue, worry, hypochondriacal ideas, feelings of being dazed, and diffuse pan-psychoneurotic manifestations. Tillman advises that the work habits be studied, that shiftiness and general asocial characteristics carry the liability of schizophrenia. Caldwell studied 100 schizophrenic soldiers. He found schizoid personality a most common type, and the precipitating factor was sexual abnormalities in 50% of the cases. Hoskins considers the earlier symptoms non-specific with a general loss of capacity to get on effectively with everyday activities and a tendency toward misinterpretation as the basic feature. Malmud and Malmud brought out the following characteristics as most common: quiet, sensitive, reserved, timid, feelings of inferiority and inadequacy, insecure, passive and unstable.[6]

Psychological studies show early characteristics of instability, while all physiological studies so far made are not conclusive, but show one characteristic in common. Any data observed showed a greater variability than normal. Some studies suggested that the schizophrenic is poorly adapted to deal effectively with stimuli.[7]

In summary, a review of the literature on prodromata indicate that the type of isolated living called schizophrenia is most likely to develop in those persons who have the history of mental disease in their family, who have anatomically an asthenic or dysplastic body structure, who show marked variability in physiological reactions, who make loose family connections, tend to be anxious, have inability to get along with everyday activities and tend to misinterpret. Their employment record is likely to show shiftiness. Psychological testing shows emotional instability and signs of emotional blunting with loss of interest.

There is evidence of an inherited factor which probably has to do with the finding of small hearts and irregular bodies in the group, but it must be remembered that at least 50% of schizophrenics show very slight evidence of inborn factors. Many have normal builds; also many investigators do not find schizoid personality as a prerequisite. There is uniformity among all observers that there is dif-

ficulty in the intra-family relationships, there is difficulty in sexual development, but the relation of the individual to the community is perhaps the prominent factor in producing the maladjustment.

The physician who first sees this potential schizophrenic cannot take anthropological measurements. He cannot study numerous physiological tests, or have a battery of psychological studies performed. He finds a patient who is anxious, shy and has many hypochondriacal complaints. The patient may or may not be in danger of chronic mental disease. The doctor has to decide. The following study was made to help him in his dilemma.

The records of 220 schizophrenics were carefully reviewed. Of this number 70 records were selected which described the premorbid traits of the patient with sufficient clarity to draw conclusions. The traits that appeared in one record were then checked with others until twelve characteristics were selected for study. The percentage frequency of their occurrence was then estimated. This was followed by a determination of the number of years previous to the outbreak of definite schizophrenia these characteristics appeared.

The first characteristic situation that appeared in the history was entitled lack of normal identification with parents. For some reason the boy or the girl did not have the usual association with his or her parents. These reasons included death or absence of one of the parents, and the rejection of the child by the parents. Children born late in the life of parents after many other siblings intervened were found to be unable to associate with parents sufficiently to absorb a sufficient number of their personality traits to enable them to develop social skills. Any disruption of the family to affect childhood development in a serious fashion should take place within the first ten years of life. Therefore, as you would expect, evidence of lack of the usual amount of parental identification occurred an average of 18 years before the illness in 57% of the records selected.

The appearance of traits was considered from the point of view of chronological development; that is, according to the number of years the trait appeared before there was a frank outbreak of schizophrenia. The second finding, when this method was followed, (see Table IV) was evidence of actual rejection of the child by parent or parents, a condition included in the previous category, but so striking in its occurrence that it was studied as a separate trait. The designation of rejection by parents was given to a situation where there was open hostility by parents or the opposite pathological over-protection which was considered a reaction formation to rejection, therefore of the same significance. Any situation that led the patient to feel rejected by parents was included in this group. Definite rejection, as described, occurred in 31% of the 70 records and occurred on an average of 16.1 years before the onset of disease.

Abnormal fears began to appear early also. Fears of closed places, fears of the dark of severe degree occurred in 18 cases on an average of 13.6 years before the disorder became definite. In the next group were 16 patients who were found to have had inferiority feelings for many years. Some of them had compensatory attitudes of superiority which they admitted were hiding feelings of inferiority. The average length of their existence prior to the outbreak of definite disease was 12.6 years.

Forty-two or 60% of the patients gave a history of social maladjustment—difficulties with play, with school or with work; inability to make friends or to hold them; dissatisfaction with situations, especially with jobs which were changed frequently. All these characteristics were grouped under social maladjustment. The average length of appearance before disease onset was 10.9 years. As the average age of onset of frank schizophrenia among our patients was 24.6 years, social maladjustment as designated above occurred on an average in early adolescence.

Difficulty in heterosexual adjustment was the most common finding occurring in 53 or 76% of the cases 9.6 years before onset. The age of 15 was selected arbitrarily as the upper limit of the time when a person should show some interest in the other sex. Other difficulties in sex adjustment were included, especially those who had made an attempt and then failed. Seclusiveness began to appear nine years before the disease. Thirty patients showed this as a definite trait. Guilt feelings over masturbation and special religious preoccupations sufficient to interfere with life were the next to appear.

Approximately eight years before onset definite symptoms of nervousness or anxiety tension began to appear. Such things as flying off the handle, getting upset easily, difficult to manage, were de-

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scribed by the patient or by relatives and friends. About this same time physical complaints for which no definite organic source could be found began to appear. Irritability of a constant nature without evident cause and hypochondriacal complaints are perhaps signs of incipient schizophrenia, yet the average time of onset was eight years before the disease. Certainly day-dreaming of such a degree that it was used as a substitute for action and interfered with normal living is a symptom of the disease rather than one of prodromata, yet it is included because in ten patients the first appearance of pathological day-dreaming was 4.5 years before onset of outspoken disease.

The breakdown of the cases according to sub types is shown in Table No. III, while Table No. IV shows the twelve reaction types arranged according to the number of years their appearance antedated the outbreak of schizophrenia. Table No. V, which presents the types arranged according to percentage frequency, emphasizes the fact that interpersonal relations have most to do with the disease development, but that inter-family relations in early life set the stage, as it were, for future development.

TABLE III

Total Number of Cases of Schizophrenia		70
Paranoid	37	
Simple	16	
Catatonic	12	
Hebephrenic	5	
Average Age of Onset of Schizophrenia		24.6 years

TABLE IV

Type	Cases	Per Cent	Average Duration
1. Lack of Normal Identification with Parents	40	57%	18.0 years
2. Actual Rejection by the Parent or Parents	22	31%	13.6 years
3. Fears	18	26%	13.6 years
4. Feelings of Inferiority or Compensatory Superiority	16	23%	12.6 years
5. Social Maladjustment	42	60%	10.9 years
6. Difficulty in Heterosexual Adjustment	53	76%	9.6 years
7. Seclusiveness	30	43%	9.5 years
8. Masturbation Guilt	16	23%	9.3 years
9. Religious Preoccupations	12	17%	9.1 years
10. Irritability	21	30%	8.8 years
11. Physical Complaints	23	33%	8.1 years
12. Day-Dreaming	10	14%	4.5 years

Therefore, if you have a patient who is irritable and tense, with vague physical complaints for which there is no definite cause, and you find that the patient had a broken home or an over-protective mother, has feelings of inferiority, has not learned to play or work with others, and now is beginning to withdraw from contact with the community, you have cause to be alarmed, because that patient is a potential schizophrenic who in another five years at least will have evident symptoms of the disease. Psychiatric study should be instituted at once. The patient may already be beyond brief psychotherapy and in need of prolonged analysis or perhaps shock therapy.

TABLE V

Type	Cases	Per Cent
Difficulty in Heterosexual Adjustment	53	76%
Social Maladjustment	42	60%
Lack of Normal Identification with Parents	40	57%
Seclusiveness	30	43%
Physical Complaints	23	33%
Actual Rejection by the Parent or Parents	22	31%
Irritability	21	30%
Fears	18	26%
Feelings of Inferiority or Compensatory Superiority	16	23%
Masturbation Guilt	16	23%
Religious Preoccupations	12	17%
Day-Dreaming	10	14%

The girl or boy that fails in his social adjustment up to the age of 15 and the girl or boy who has given no definite evidence of interest in the other sex by the same age should also have investigation, especially if there is evidence of an abnormal home situation. The doctor, the teacher and the family should be on the alert to recognize maladjustment at this age so as to prevent the advancement into the use of fantasy as an escape, a condition that so frequently becomes habitual, leading on to that way of life, the disease schizophrenia.

Of course, these twelve types or constellations of events occur in many individuals who do not develop this serious mental disorder. Yet, if the physician, on finding one present in the history will then seek for the others, he can tell by their presence or absence how serious the patient's situation is, and how far the patient has advanced down road toward manifest schizophrenia.

PSYCHOLOGICAL SUMMARY

Persons suffering from pre-schizophrenia show

impaired contact with reality as is evidenced by peculiarities of thinking, action, or emotional expression; since they have neither the acute symptoms (delusions, hallucinations, etc.) nor complete lack of contact with ordinary living, they cannot be considered psychotic. One group of pre-schizophrenics show long-standing inhibition, inappropriate anxiety, and often are preoccupied with sexual matters, etc. They are apt to be incapable of critical evaluation of situations and their own behavior, and of efficient planning and thinking. Their emotions are apt to be impulsive and inappropriate. The other pre-schizophrenics show a tendency to retreat into fantasy and at the same time a great deal of emotional impulsiveness and inappropriateness; also, with poor control of their emotions. Their fantasies may be completely unrealistic and may be pre-occupied with sexual fantasies. In summary, very immature emotional expression and peculiar thinking, with intellectual functions still good enough to prevent the acute symptoms, appear to be the forerunners of schizophrenia.

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DISCUSSION

DR. HOWARD R. MASTERS, Richmond: Dr. Wilson has, in his presentation, correlated findings of pre-psychotic schizophrenic states in which I have for a long time held much interest. He has presented the subject thoroughly and most clearly.

It is not too difficult to detect signs and behavior reactions in children and adolescents which are suggestive of schizophrenia or schizoid personality states. We have in the past most likely avoided too much mention of these possibilities to parents and have probably been just as dilatory in recommending treatment for fear that the patient might be tagged with the diagnosis which it might be difficult to get rid of.

Unquestionably schizophrenia is predominantly a disease of environment but not without the effect of heredity and the particular kind of constitution possessed by the individual. Potential mechanisms of schizophrenia may be observed in children under two years of age and may be expressed as shyness, over modesty, especially in reference to the genital and anal regions, evidence of fears, asocial or hostile reactions. Such children should be observed closely through their childhood and the environment analyzed and corrected if possible. We have seen schizophrenia manifest itself at the age of 9, and the early symptoms appeared to be those of manic excitement. The patient required hospitalization because of the acuteness of the psychosis. Signs and symptoms of this personality type frequently become more apparent in the so-called stage of puberty. One little girl who began to menstruate at 11 resented the fact to the extent that at the age of 12 she had almost suppressed her menstruation and the arrest in her personality development was revealed in her statement, "I do not want to menstruate because it means you will grow to be an adult, and adults have so many responsibilities and troubles that I always want to remain a little girl." She later showed very strong schizophrenic behavior and definite arrest in her physical as well as personality development.

Dr. Wilson brought out the fact of rejection, either by parents or other members of the family, as an important factor. This psychopathological process frequently leads to fear and insecurity, which often has an effect on the neuro-physiological function of the vegetative nervous system through producing vascular vasoconstriction, reduced circulation and restricted metabolic processes. This of itself may be sufficient to affect the endocrines and to arrest development. Nolan D. C. Lewis showed many years ago that the heart and the greater vessels of schizophrenics were approximately one-third smaller than those of average normals. The actual vascular tension was also less. These findings can be observed in schizophrenics during life and at autopsy. By doing orthodiagrams of the heart and keeping consistent blood pressure and pulse readings, some train cell changes have been noted. In adolescent children, if these signs are picked up, early treatment with endocrine preparations and correction of the pathological environmental situations may be helpful in preventing the development of schizophrenia. It is exceedingly important that children who show pre-schizophrenic signs should not be handled as psychotic individuals, but on a regime of guidance of the child and correction of the environmental pathological situation which may exist. Detailed study of the every-day living of the family is most important. If the evidences of maladjustment of the child become too great and the cooperation of the family too little, frequently a well controlled treatment residence should be selected where guidance may be carried out under a psychiatrist well oriented in child psychiatry, psychiatrically trained social workers and house mothers, such as is being done in the Memorial Guidance Clinic with its associated Memorial Foundation Home.

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I would like to again thank Dr. Wilson for his very excellent paper.

DR. GORDON C. G. THOMAS, Charlottesville: This paper as originally titled in the program was to include something of the therapy in pre-schizophrenic states. Because of the time allotted, we decided to leave out any consideration of therapy.

I should like to emphasize one thing. As shown in our paper, when we take the histories of schizophrenic patients, early maladjustments are evident many years before the onset of actual schizophrenia. The recognition of these early states should be the concern of all physicians. Our state hospitals are crowded, and anything that can be done to lessen the number in the future is of major concern. Just as in cancer and tuberculosis, mental disease is much more amenable to therapy in its earliest stages.

The family physician usually has the best opportunity to recognize early maladjustments, and it should be the responsibility of all physicians to note these and to spend a few minutes conferring with the child or adolescent and the family. He might be able to affect various adjustments in the home or school, and, if the problem is too great, the patient should be referred for psychiatric investigation.

Develop New Surgery to Relieve Heart Failure.

Three new operations that relieve heart failure have been devised by two doctors from the Buenos Aires Medical School, Buenos Aires, Argentina.

"An immediate and dramatic improvement in patients suffering from heart failure who were no longer responsive to medical treatment has been the rule over a period of six months, which is our longest observation time," Pedro Cossio, M.D., and Isidro Perianes, M.D., write in the July 2nd *Journal of the American Medical Association.*

The procedures are designed to drain off blood from the lungs by creating an artificial passage through which it can flow into the main circulatory system of the body, and to reduce output of blood from the right side of the heart.

"Drainage of a large proportion of pulmonary venous blood into the systemic circuit represents a physiologic approach to surgical management of the 'cardiac lung.' Thereby, the excessive blood discharged by the right ventricle reaches the general circulation directly from the lungs, and pulmonary stasis [stoppage of blood flow] disappears. The stress on the left ventricle is reduced and allows for an increase in output once it has reached a point below the critical level."

Question Value of Rice Diet.

Restriction of table salt by the rice diet or other diets does not appear to be of much benefit in treating patients with advanced high blood pressure, a study made by doctors from Washington University School of Medicine, St. Louis, shows.

"Restriction of sodium chloride in the diet, either by the rice diet or other means, is usually ineffective when the condition is advanced," Henry A. Schroeder, M.D., Melvin L. Goldman, M.D., Palmer H. Futcher, M.D., and Marlene Hunter, B.S., of the Department of Internal Medicine of the school and Barnes Hospital report in the June 4th *Journal of the American Medical Association.*

Of 16 patients treated by the doctors for high blood pressure, response to the rice diet or other low salt diet was poor in 13, most of whom were suffering from the disease in its severer stages. Three patients with milder forms of the disease were benefited.

As a possible explanation of the beneficial effects of the diet in some cases of high blood pressure, patients may have a condition of which high blood pressure is only one symptom.

Six other patients, all obese and all having symptoms suggestive of an alteration in some of the functions of the adrenal cortex (the outer portion of the adrenal glands, located at the upper end of each kidney) were treated by the doctors for high blood pressure. All were benefited by a low salt diet.

ARTERIOSCLEROTIC HEART DISEASE IN DIABETICS*

ROBERT L. BAILEY, JR., M.D.,
Richmond, Virginia.

Introduction: It is generally conceded that diabetics are prone to exhibit the stigmata of arteriosclerosis, including arteriosclerotic heart disease, with greater frequency and at an earlier age than non-diabetics.[1] Because of this characteristic of diabetes it should be profitable to study a group of these patients for evidence of arteriosclerotic heart disease, to examine the manifestations of this heart disease, and to evaluate the influence of severity, duration, degree of control of diabetes and of other factors on its development. It is hoped that such a study might ultimately add something to the understanding of arteriosclerosis and arteriosclerotic heart disease.

Material and Methods: Five hundred consecutive, unselected diabetics are included. Most of these were followed over a period of several years and subjected to both physical and laboratory examinations, including electrocardiograms, at frequent intervals. Electrocardiograms had not been taken on many of the children and some of the young adults and only those with electrocardiograms were included in the study. Because of this, the series has fewer cases in the younger age groups. The ages ranged from 15 to 87 years, with an average age for the group of 55.7 yrs. Ninety-five per cent were white and the rest colored. Almost all were native born Americans. Sixty per cent of the group were females.

The duration of diabetes was determined from the onset of symptoms or the discovery of glycosuria. The severity of diabetes was based on insulin requirements; those taking ten units or less a day were classed as mild, those taking from eleven to thirty units a day were considered moderate, and those needing more than thirty units were called severe diabetics. Episodes of acidosis were determined by the clinical findings of acidosis and the presence of acetone in the urine but not by the presence of acetone alone. A blood sugar level of 200 mg.% was selected to classify the degree of control of diabetes. If most of the blood sugar determinations were below this level, the control was considered good; if above 200 mg.% it was classed as poor. Coronary occlusion and angina pectoris were considered to be evidence of arteriosclerotic heart disease. So was congestive failure when types of heart disease other than arteriosclerotic were absent. The diagnosis was made from the electrocardiogram when it showed the characteristic T-wave changes in the limb leads and chest lead, when the QRS complexes were low and split and accompanied by T-wave changes, and when there was bundle branch block.

Findings: Coronary occlusion occurred in 51 cases of this series. Angina pectoris was present in 38 cases, and congestive heart failure occurred in 44 cases. The electrocardiogram showed many abnormalities. Interventricular heart block was present in 18 cases. T-wave changes characteristic of arteriosclerotic heart disease were found in 151 cases. The Q-wave in lead III was found to be abnormally deep in many cases but this alone was not used as evidence of arteriosclerotic heart disease. Abnormal rhythm was present in several cases and prolonged P-R conduction time was found a few times.

TABLE I

Age Group years	Number of Cases	Cases with As. Ht. Dis.	Percentage
11-20	3	0	
21-30	19	0	
31-40	36	3	8%
41-50	85	17	20%
51-60	154	57	37%
61-70	155	72	40%
71-80	43	22	51%
81-90	5	4	80%
Total	500	175	35%

Distribution of cases and frequency of arteriosclerotic heart disease by decades.

A total of 175 cases or 35% of the series were classified as having arteriosclerotic heart disease. Of the 21 diabetics below the age of 31 years, none had heart disease. Three or 8.3% of the 36 cases between 31 and 40 years showed evidence of arteriosclerotic heart disease. There were 85 cases in the 41 to 50 year decade with 17 of them or 20% having heart disease. The frequency increased with age and the next four decades with 154, 155, 43,

*Read before the annual meeting of the Medical Society of Virginia in Richmond, October 18-20, 1948.

I am indebted to Dr. William R. Jordan from whose file of private patients these cases were taken.

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and 5 cases respectively had 37%, 40%, 51% and 80% incidence of arteriosclerotic heart disease.

Evidence of heart disease was present in 35.6% of the males and in 34.7% of the females. There was no significant difference between the sexes in the various decades.

years duration had an incidence of 41.9%. The influence of duration of diabetes was most apparent in cases between 41 and 70 years of age.

Three hundred and twenty-five of the series were classed as obese and 175 as non-obese. 39.1% of the obese group had arteriosclerotic heart disease as opposed to 27.4% of the non-obese group.

TABLE II

Age Group years	Mild Cases	% Ht. Dis.	Moderate Cases	% Ht. Dis.	Severe Cases	% Ht. Dis.
11-20	0		0		3	
21-30	3		2		14	
31-40	15	6.7%	7	14.3%	14	7.1%
41-50	49	14.1	16	18.8	20	35.0
51-60	69	29.0	45	37.8	40	50.0
61-70	48	41.7	59	45.8	48	51.2
71-80	23	43.3	12	50.0	8	52.1
81-90	1		2	100.0	2	100.0
Total	208	27.9%	143	39.2%	149	40.9%

Degree of severity of diabetes and frequency of arteriosclerotic heart disease by decades.

There were 208 mild, 143 moderate, and 149 severe diabetics. These groups showed a 27.9%, 39.2%, and 40.9% incidence of arteriosclerotic heart disease respectively. This increased frequency with increase in severity of diabetes was seen only in the cases over 40 years of age and was most marked in those cases between 41 and 60 years of age.

There was good control of diabetes in 404 cases and poor control in 96 cases. These groups showed a 30.2% and a 55.2% incidence of heart disease respectively. This was best seen in the 5th and 6th decades.

Clinical acidosis occurred in 40 cases. There was no increase in the frequency of arteriosclerotic heart disease in this group. There were too few colored patients in the series to justify any conclusions.

TABLE III

Age Group years	4 years and less Cases	% Ht. Dis.	5 to 9 years Cases	% Ht. Dis.	10 to 14 years Cases	% Ht. Dis.	15 years and more Cases	% Ht. Dis.
11-20	3	0%	0	0%	0	0%	0	0%
21-30	5	0	4	0	5	0	5	0
31-40	18	11.1	8	12.5	8	0	2	0
41-50	41	19.5	17	17.6	13	23.1	14	21.4
51-60	49	28.6	50	40.0	31	45.2	24	37.5
61-70	37	37.8	34	41.2	40	47.5	44	56.8
71-80	11	54.5	8	37.5	8	50.0	16	56.3
81-90	0	0	0	0	1	100.0	4	75.0
Totals	285	29.8%			215	41.9%		

Duration of diabetes and frequency of arteriosclerotic heart disease by decades.

There were 164 cases with diabetes of less than five years duration; 121 cases fell in the 5 to 9 year group; 106 were from 10 to 15 years duration; and 109 cases were of 15 or more years duration. The cases of less than 10 years duration showed 29.8% arteriosclerotic heart disease, and those of over 10

DISCUSSION

These results have been subjected to statistical analysis and the difference in two groups has been

TABLE IV

Age Groups years	Obese Cases	% with Ht. Dis.	Non-Obese Cases	% with Ht. Dis.	% Obese Cases in Total Ht. Dis. Cases
11-20	0	0%	3	0%	0%
21-30	3	0	16	0	0
31-40	20	15	16	0	100
41-50	66	19.7	19	21.0	76.5
51-60	105	39	49	32.6	71.9
61-70	103	46	52	38.4	72.2
71-80	25	60	18	38.8	68.2
81-90	3	100	2	50	75
Totals	325	39.1%	175	27.4%	72.6%

Obesity and the frequency of arteriosclerotic heart disease by decades.

TABLE V

Age Group years	Good Control Cases	Good Control % Ht. Dis.	Poor Control Cases	Poor Control % Ht. Dis.
11-20	2	0%	1	0%
21-30	13	0	6	0
31-40	30	6.7	6	16.7
41-50	75	16.	10	50.
51-60	123	28.5	31	71.
61-70	119	43.7	36	55.6
71-80	38	47.4	5	80.
81-90	4	75.	1	100.
Totals	404	30.2%	96	55.2%

The degree of control of diabetes and the frequency of arteriosclerotic heart disease by decades.

considered significant only where this difference is more than twice the sum of the standard error for the two groups. The influence of chance is thus reduced to a minimum. Several findings emerge as significant.

The greater the duration of diabetes, the higher the incidence of arteriosclerotic heart disease. This is shown in this series by a significant difference in the frequency of heart disease in cases with diabetes of less than ten years duration and in cases of ten or more years duration. Root[2] states that an exposure to diabetes of several years duration is an important factor in the development of angina pectoris and finds that the frequency of angina trebles in the second ten years of diabetes. In autopsies Warren[3] found advanced arteriosclerosis in all cases of over 15 years duration and Rabinowitch[4] believes that the duration of diabetes is the most important factor determining the frequency of arteriosclerosis. Even more striking are the findings in a recent report of autopsies by Millard and Root.[5] In seven diabetics with onset between 10 and 18 years of age and a duration of 14 to 20 years, all cases showed marked arteriosclerosis of the coronary arteries. In contrast to these were five cases with onset between 11 and 27 years of age and a duration of less than six years, none of which showed significant coronary arteriosclerosis.

There is a significantly higher incidence of arteriosclerotic heart disease in moderate and severe diabetics than in mild diabetics. This has not been found in autopsy studies, and Stearns, Schlesinger, and Rudy,[6] as well as Hart and Lisa,[7] state that the severity of coronary arteriosclerosis is not correlated with the severity of diabetes. Dolger,[8] in a clinical study of 200 diabetics of 25 years duration, found that severity of diabetes had no influence on the incidence of arteriosclerosis. That the clinical evidence of coronary arteriosclerosis is influenced by the severity of diabetes is shown, however, by this series where 40% of 292 cases of moderate and severe diabetes had evidence of coronary arteriosclerosis and only 28% of 208 mild diabetics had such findings.

The presence of obesity in diabetics favors a higher incidence of arteriosclerotic heart disease. The percentage of obese diabetics with evidence of arteriosclerosis increased with increase in age, as would be expected, and was significantly greater than the percentage of cases of arteriosclerosis in the non-obese group. Of greater interest, however, was the fact that a high percentage of the cases with arteriosclerosis in each decade were obese, and that this was most marked in the younger cases. Thus, all cases with arteriosclerotic heart disease in the 31 to 40 year age period were obese. This proportion decreased in succeeding decades, so that only 68% of the cases with arteriosclerosis in the eighth decade were obese. It seems, then, that obesity not only favors the development of arteriosclerotic heart disease but also favors its appearance at an early age.

There is no significant difference between the frequency of arteriosclerotic heart disease in male and female diabetics. This has been noted in several studies of autopsy material[9] and is in marked contrast to the preponderance of arteriosclerosis in the males of the non-diabetic population.[10]

There is a difference of opinion in the literature as to the influence of close control of diabetes on the development of arteriosclerosis. In autopsy material, Milland and Root[5] found that cases showing most marked arteriosclerosis had had poorly controlled diabetes. Ricketts[11] believes that hyperglycemia is harmful to the diabetic patient, and others[12,13] share this view. Lawrence[14] and Tolstoi,[15] however, find no reason to believe that hyperglycemia causes premature onset of arteriosclerosis in the diabetic, and Sindoni[16] states that a postprandial blood sugar level below 170 mg.% probably contributes to or causes the vascular injury. The final answer to this question will not be given until the nature of diabetes and of arteriosclerosis are better known. This series, however, shows that diabetics with poor control have a significantly higher incidence of arteriosclerotic heart disease and that this

is best seen in cases between the ages of 41 and 60 years.

In conclusion, it appears that four of the factors considered in this study favor the development of arteriosclerotic heart disease. These are: (1) obesity, (2) diabetes of ten or more years duration, (3) diabetes of moderate or severe degree, and (4) poorly controlled diabetes.

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DISCUSSION

DR. J. EDWIN WOOD, JR., Charlottesville: Dr. Bailey has shown the acceleration of arteriosclerotic heart disease associated with diabetes. As a matter of fact, it is even more striking in the remainder of the vascular tract. Dr. Mulholland kindly gave me a study reported in October, 1947, on the relationship between vascular and metabolic disease. The leading paper of this group was by Dr. Priscilla White, of the New England Deaconess Hospital. These cases started quite young with diabetes. It was shown that in these young adults with long standing diabetes the incidence of coronary disease was 8 per cent; nephritis 50 per cent; retinal hemorrhage 80 per cent; retinal sclerosis 85 per cent. These patients were not over thirty-nine years of age and had suffered from diabetes fifteen to twenty years. So that diabetes is definitely associated with progressive vascular disease even in very young people.

Dr. Bailey has shown us that diabetes alone is bad enough, but his data strikingly indicate that diabetes with obesity is decidedly worse, particularly in young adults.

Others are better qualified to discuss the difference in the management and control of diabetes, but I remember that some years ago it was thought wise to keep carbohydrate as low as possible and make up calories with a very high fat diet, which is the exact antithesis of what we do today. You remember, further, that the regime of high fat and low carbohydrate apparently led to inferior results when compared to what we get today, with a relatively high carbohydrate high protein diet and relatively low fat. Many of the cases in Dr. Priscilla White's series must have had both types of treatment and further work is necessary in this regard.

The solution of this problem is more than the solution of the problem of diabetes. Considerable light has been thrown on arteriosclerosis itself, and while it may not have solved the whole problem, it will at least be the opening wedge. We may at least look forward to some control of progressive vascular disease with diabetes.

DR. H. B. MULHOLLAND, Charlottesville: I have been very much interested in Dr. Bailey's paper and also in Dr. Wood's discussion. It does seem that there are quite a few points that should be emphasized. Dr. Wood has just mentioned the fact that arteriosclerosis, by and

large, in diabetics is similar to arteriosclerosis in non-diabetics; and therefore an insight into the causes of arteriosclerosis in diabetics might throw some light on the important subject of arteriosclerosis in non-diabetics.

The matter of obesity and the question of diet have been touched upon, and I am glad that Dr. Wood brought out this point, namely, that perhaps some of Priscilla White's and Dr. Dolger's patients who have had diabetes for twenty or twenty-five years undoubtedly started at the time when we used a regime of treatment with a low carbohydrate and high fat diet, which may have had something to do with the high incidence of arteriosclerosis. We cannot be certain, but it is a possibility to be considered in discussing these series of cases.

The group working on arteriosclerosis at Bellevue in New York has shown that many people who come to autopsy table in an emaciated state were obese before their last illness; and they also seem to have shown that there has been a disappearance of cholesterol from the arteriosclerotic plaques and blood vessels of those individuals during their last illness, indicating that the loss of weight which occurred at that time has been associated with some change in cholesterol metabolism. I think that the most interesting problem being studied is that of cholesterol metabolism, which is being attacked by many individuals. Dr. Ricketts, of Chicago, is conducting a series of experiments which now have gone on for several years on dogs with diabetes control and without control. To rule out hereditary factors, he is using a pure strain of beagle hounds. The results of this study, of course, will not be known for some years.

May I repeat that this has been a very interesting paper. I should like to ask if anybody knows of any similar series of cases of obese non-diabetic individuals who have been studied and whether there is a similar high incidence of arteriosclerosis and arteriosclerotic heart disease in these obese non-diabetic individuals.

DR. WM. R. JORDAN, Richmond: I should like to make just two or three comments. One is that I think a study such as this will help us to understand better the degenerative diseases, which seem to be our chief problem at present.

Two things rather stand out. One is that in estimating the influence of any one causative factor one must rule out other more important factors. For example here, the way arteriosclerosis is influenced by age is far greater than any other single factor we know of. Unless we take a younger age group, say thirty to sixty years, I do not think we can properly estimate the other factors. I think Dr. Bailey's slides brought that out.

The difference between this paper and others read by Dolger and Tolstoi, *et al.*, is that some of them are very pessimistic. We read that control has nothing to do with it, that diet has nothing to do with it, that duration alone will determine it. Of these factors which Dr. Bailey mentioned—duration, severity of the disease, control, and obesity—we have two absolutely under our control. They are the blood sugar and the weight. We cannot influence the duration, and often cannot influence the degree of severity. There is, however, some evidence that prompt and continuous control of diabetes does make it milder, and that does give us a ray of hope.

I certainly enjoyed the paper.

DR. BAILEY, closing the discussion: I should like to thank Dr. Jordan and Dr. Mulholland and Dr. Wood for their discussion.

New Upjohn Branch in Philadelphia.

With the acquisition of 25,500 square feet of space on the seventh floor of the Terminal Commerce Building, 401 North Broad Street, a new Philadelphia Branch of The Upjohn Company will be in operation on or about July 1, 1949. This branch will serve eastern Pennsylvania, southern New Jersey, Delaware, Maryland, Virginia, northern North Carolina, and the District of Columbia, all of which were formerly in the New York branch. The unique facilities of the Terminal Commerce Building, viz., rail sidings under the building, under-cover truck docks, and a post office within the building, plus the central location of the branch in Philadelphia, will enable The Upjohn Company to offer improved services to the druggists in the branch area.

XUM

AN ANALYSIS OF 27 REPORTED FATALITIES IMMEDIATELY FOLLOWING THE INJECTION OF A MERCURIAL DIURETIC

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The purpose of this paper is to present statistical data and comments on an analysis of 27 cases which have been reported in the literature in which death occurred immediately after the injection of a mercurial diuretic. Even though no definite conclusions can be drawn from this study, it is felt that the data as presented are of value.

A. Sex:

Fourteen deaths occurred in males and 13 deaths occurred in females.

B. Age:

0—20 years	5 deaths
20—40 years	4 deaths
40—60 years	11 deaths
60—80 years	7 deaths

C. Clinical Diagnosis:

Congestive heart failure	9 cases
Nephritis	4 cases
Arteriosclerosis	4 cases
Rheumatic heart disease	3 cases
Nephrosis	3 cases
Myocardial infarction	3 cases
Hypertensive cardiovascular disease	3 cases
Arteriosclerotic heart disease	3 cases
Nephritis, nephrotic stage	2 cases
Angina pectoris	2 cases
Congenital heart disease	2 cases
Diabetes	2 cases
Tabes dorsalis	1 case
Ventricular aneurysm	1 case
Pulmonary infarction	1 case
Syphilitic heart disease	1 case
Aortic insufficiency	1 case
Post-rheumatic and post-thyrotoxic heart disease	1 case
Cirrhosis of the liver	1 case
Myxedema	1 case
No diagnosis	1 case

D. Laboratory and Physical Findings:

Edema	13 cases
Urinary albumen 3 plus or more	12 cases
Hypertension	12 cases
Normal blood pressure	9 cases
Enlarged liver	8 cases
Urinary sp. gr. 1.028 or less	8 cases
Pulmonary congestion	8 cases
Cardiac enlargement	7 cases
Cardiac arrhythmias	7 cases
Ascites	7 cases
Leukocytosis	6 cases
Secondary anemia	5 cases
Total plasma proteins less than 5 gms. per 100 cc.	5 cases
Blood urea nitrogen 20 mg. or more	4 cases
Hydrothorax	4 cases
Myocardical infarction	3 cases
Oliguria	3 cases
Dyspnea	2 cases
Cyanosis	2 cases
Angina pectoris	2 cases
Anasarca	2 cases
Polycythemia	1 case
No diagnosis	3 cases

E. Mercurial Diuretic Used Immediately Preceding Death:

Mercupurin	9 cases
Salyrgan	7 cases
Neptal	3 cases
Esidrone	2 cases
Salyrgan and Theophylline	2 cases
Neptal diluted to 10 c.c. with normal saline	1 case
Neptal diluted to 5 c.c. with distilled water	1 case
Neptal diluted to 2 c.c. with normal saline	1 case
Mersalyl diluted to 10 c.c. with normal saline	1 case

F. Amount of Mercurial Diuretic Used Immediately Preceding Death:

1 c.c.	4 cases
2 c.c.	18 cases
3 c.c.	1 case

From the Medical Service of the Newton D. Baker Veterans Administration Hospital.

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4 c.c. ---------- 2 cases
5 c.c. ---------- 1 case
Not reported ---------- 1 case

G. Route of Administration of Mercurial Diuretic Immediately Preceding Death:
Intravenous ---------- 26 cases
Not reported ---------- 1 case

H. Mercurial diuretics had been used prior to the dose immediately preceding death in 23 cases. Death occurred with the first injection of a mercurial diuretic in 4 cases.

I. Routes of Administration Previously Used:
Intravenous ---------- 19 cases
Intramuscular ---------- 2 cases
Rectal and intravenous ---------- 1 case
Not reported ---------- 2 cases

J. Previous Doses Used:
.3 to 1 c.c. ---------- 1 case
1 c.c. ---------- 7 cases
2 c.c. ---------- 10 cases
Not reported ---------- 1 case

K. Reactions Following Previous Mercurial Diuretic Therapy:
No previous reactions ---------- 12 cases
Previous ---------- 7 cases
Not reported ---------- 4 cases

L. Diuretic Response to Previous Mercurial Therapy:
Good ---------- 11 cases
Fair ---------- 3 cases
Poor ---------- 6 cases
Not reported ---------- 3 cases

M. Signs and Symptoms of the Fatal Reaction Which Immediately Followed the Administration of the Mercurial Diuretic:
Cyanosis ---------- 10 cases
Gasping ---------- 7 cases
Dyspnea ---------- 7 cases
Pulse not detected ---------- 7 cases
Collapse ---------- 5 cases
Convulsions ---------- 5 cases
Unconsciousness ---------- 5 cases
Pain in various locations ---------- 5 cases
Respiratory difficulty ---------- 4 cases
Ventricular fibrillation ---------- 3 cases
Irregularity of the heart ---------- 3 cases
Rapid heart action ---------- 3 cases
Heart not heard ---------- 3 cases
Vomiting ---------- 2 cases
Flushed face ---------- 2 cases
Extra systoles ---------- 1 case
Cardiac standstill ---------- 1 case
Slow beat ---------- 1 case
Bundle branch block ---------- 1 case
Spasm ---------- 1 case
"Jumping of the heart" ---------- 1 case
Cough ---------- 1 case
Not reported ---------- 1 case

N. Length of Time After the Administration of the Mercurial Diuretic Until the Onset of the Reaction:
Immediately ---------- 11 cases
Few seconds ---------- 1 case
One-half minute ---------- 2 cases
One minute ---------- 3 cases
Two minutes ---------- 7 cases
Few minutes ---------- 1 case
Five minutes ---------- 1 case
Not reported ---------- 1 case

O. Length of Time After the Administration of the Mercurial Diuretic Until Death:
Immediately ---------- 8 cases
Very quickly ---------- 1 case
One minute ---------- 1 case
Two minutes ---------- 3 cases
Two and one-half minutes ---------- 1 case
Three minutes ---------- 6 cases
Four minutes ---------- 1 case
Five minutes ---------- 2 cases
Few minutes ---------- 4 cases

P. Autopsy Reports Reveal:
No cause for immediate death ---------- 14 cases
No autopsy report ---------- 13 cases

COMMENT

It is a fact that death does sometimes occur immediately following the use of a mercurial diuretic, and such deaths do not bear any definite relationship to the sex nor the age of the patient.

From the clinical diagnoses it is noted, as one would expect, that the patient had either heart disease or kidney disease, associated with, or complicated by, other conditions, which figures can have little or no meaning in that the total number of like cases which have received mercurial diuretics not followed by immediate death is not known.

While it is a fact that 9 of the deaths occurred following the use of mercupurin and 7 of the deaths occurred following the use of salyrgan, no one knows the relative incidence of the use of the va-

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rious mercurial diuretics; therefore, these facts can be of no value.

It may be of interest to note that death occurred in 4 cases following the use of diluted mercurial diuretics.

Of the 27 cases reported, more than 1 c.c. of the drug was used in 21 cases immediately preceding death, and in 1 case the amount of the drug used at this time was not reported.

To be noted is the fact that 26 deaths followed the intravenous route of administration. (In 1 case the route of administration was not reported). However, no figures are available which would enable one to say what percentage of mercurial diuretics are given by this, and by other routes.

From the laboratory and physical findings that have been reported in the literature concerning these cases, no definite impression can be reached since it is to be noted that in 3 cases no such report was made and in 19 cases pertinent data were lacking.

The fact that 4 deaths occurred in persons who had never before received mercurial diuretic therapy would tend to make one question the theory that death in such cases may be due to an acquired sensitivity to the drug.

Of the 23 persons who had previously received this type of therapy, 2 had not previously received it by the intravenous route, thus bringing to 6 the total number of cases who died immediately following the first intravenous administration of the drug. To be noted also is the fact that of the 27 deaths reported, only 10 had previously received as large a dose as 2 c.c.

Seven of the 23 cases which had previously received mercurial diuretic therapy are reported to have had reactions of various forms following its administration, upon one or more occasion. It may also be noted here that only 11 persons in this series of cases had previously experienced a good diuretic response following the administration of the drug.

In 24 instances the reaction immediately following the administration of the drug was accompanied by signs and/or symptoms referable to abnormal heart action, which may tend to support the theory that sudden death following the use of mercurial diuretics may be due to rhythmic disturbances of the heart, such as ventricular tachycardia, ventricular flutter and ventricular fibrillation.

It is shown that the interval between the time of the administration of the drug until the onset of the reaction varied from one-half to 5 minutes, with 1 case reported as a few minutes and 1 not reported; also that the interval between the time of the administration of the drug until death varied from immediate to as long as 5 minutes, with 1 case reported as a few minutes and 1 not reported. While these facts may not materially add to the idea that death in such cases is the result of a disturbance in cardiac rhythm, they likewise do not detract from that view point.

Autopsy reports were available in 14 of the 27 cases, and in no report was a cause for sudden death suggested.

While no definite conclusions can be drawn from the study, the following suggestions may be in order:

1. That the intravenous route of administration be omitted when satisfactory diuresis can be obtained by other routes;

2. That the smallest dose of a mercurial diuretic which will produce the desired response is the dose of choice;

3. And, particularly, to avoid the intravenous route of administration, whenever practical, in those persons who have previously experienced undesirable reactions following the same.

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Children and Tuberculosis.

Scientific evidence does not justify the belief that children born of tuberculous parents have a hereditary susceptibility to the disease, says a medical consultant in *The Journal of the American Medical Association* (May 14th issue).

The theory that the child who has nontuberculous ancestry is more susceptible because of the absence of inherited immunity is also untenable, he emphasizes. Children of tuberculous mothers or fathers do contract more tuberculosis than those of the general population if they remain in contact with their parents, the consultant explains. Children of tuberculous parents who do not have contact with the parents after birth but who at some subsequent time are exposed to contagion do not contract more primary tuberculosis than children under the same circumstances of parents not having tuberculosis. Children of tuberculous parents who subsequently have primary lesions or tuberculosis are not more likely to have the acute and chronic reinfection forms of the disease than are those from homes where there is no tuberculosis.

The belief that suscepibility to tuberculosis is inherited from parents having the disease was so firmly implanted in the minds of many people during the Middle Ages that it has been carried down to the present day, despite overwhelming evidence that the disease is caused by a microbe and is therefore contagious, and the total lack of scientific evidence for the inheritance theory, the consultant says, adding:

"The entire problem resolves itself into one of infection with tubercle bacilli, which usually occurs after birth. All children have an effective defense mechanism against the first invasion of this organism. However, this is not adequate to destroy tubercle bacilli, and some of them subsequently have clinical tuberculosis, regardless of the presence or absence of this disease in their ancestors."

Treat Psoriasis With Undecylenic Acid.

Of 41 patients with psoriasis, a skin disease characterized by patches covered with silvery white scales, 27 showed improvement after treatment with undecylenic acid, a drug that resembles the natural oils of the skin, report two New York doctors.

Writing in the July 9th *Journal of the American Medical Association,* Drs. H. Harris Perlman and Irving L. Milberg of the Department of Dermatology and Syphilology, Post Graduate Medical School, New York University-Bellevue Medical Center, say:

"It appears possible that the administration of undecylenic acid had favorable influence on the course of the psoriasis in the improved group observed. Much further investigation will be needed before definite conclusions can be drawn."

Twelve patients were classified by the doctors as "unequivocally improved," and 15 as "somewhat improved." Ten patients showed no change in symptoms from treatment with the drug, and three had distinct aggravation of the disease. Seven of eight patients with psoriatic joint disease noted relief from pain.

The drug was given by mouth and caused no serious or lasting toxic effects. Mild gastrointestinal disturbances occurred, but in only one instance did these interfere with the continuation of treatment. Many of the patients had skin lesions that had not responded to other forms of treatment.

XUM

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Disease Control of the State Department of Health for June 1949 as compared with the same month in 1948, and for the period of January through June 1949 compared with the same period in 1948, is as follows:

	June 1949	June 1948	Jan.-June 1949	Jan.-June 1948
Typhoid and paratyphoid	9	8	40	61
Diarrhea and dysentery	231	259	1,511	1,652
Measles	1,643	1,301	20,470	5,493
Scarlet fever	43	55	400	562
Diphtheria	11	19	72	118
Poliomyelitis	1	10	11	19
Meningitis	6	6	52	52
Undulant	4	8	29	47
Rocky Mountain spotted fever	19	17	30	22
Tularemia	5	5	13	29

VENEREAL DISEASE CONSULTATION SERVICE

Through a project sponsored jointly by the State Health Department and the Medical College of Virginia diagnostic and consultative facilities are available to Virginia physicians for patients with complicated "problem" cases of venereal disease. This service is conducted in the Out-Patient Department of the Medical College of Virginia under the supervision of the consultant, Dr. Frank W. Reynolds.

The facilities of the Venereal Disease Consultation Service may be utilized by any physician in the State who desires a complete diagnostic and consultative evaluation. This survey and evaluation will include: history, physical examination, serologic tests for syphilis, examination of the cerebrospinal fluid, and such additional laboratory examinations and special consultations as may be necessary to evaluate the case. The patient then will be returned to the referring physician, who will be sent a complete report of the examinations, together with specific and detailed recommendations for future management.

The service will be provided free of charge. It is emphasized, however, that the service does not include hospitalization or treatment. The patient, in addition, must arrange transportation and living costs while being examined (one to two days).

Diagnostic service will be available upon request to physicians on an appointment basis. Request forms may be procured from County Health Departments, the Venereal Disease Section of the State Health Department and the Venereal Disease Consultation Service of the Medical College of Virginia.

The Venereal Disease Consultation Service which was organized in May 1949 is now in full operation. Patients for diagnostic and consultation surveys have been referred from local health units and from private practitioners. Complete reports have been sent to the referring physician, together with specific recommendations for the future management of the case. Pertinent references to the medical literature and reprints have been enclosed whenever it seemed to be desirable to do so.

Suggestions, comments and criticisms designed to make this service of maximum usefulness to the physicians of the State will be welcomed.

MEDICAL SOCIETY OF VIRGINIA

PUBLIC RELATIONS

HENRY S. JOHNSON, *Director*

Extension of Hospital Facilities.

One of the major concerns of the Virginia Council on Health and Medical Care is a plan for more hospital beds and health center expansion.

According to Report No. 6 issued in June 1949 by the Virginia Council on Health and Medical Care, the program is expanding under funds provided by the Hill-Burton Act. Seventeen localities have raised funds to match those appropriated by the 1948 General Assembly of Virginia for this purpose.

However the Virginia Hospital Survey discloses the need for additional expansion and six other localities are on the A-priority list while many are on the B-priority list.

Hospital and health center construction will also be needed in other areas. Localities most in need of these facilities are frequently unable to raise their part of the funds thus necessitating additional state funds.

It is said that about $4,000,000 of federal funds will be available in the next two years when funds are available in Virginia to match these funds.

Virginia Pharmacists Convention.

Attending the Virginia Pharmaceutical Association convention in Roanoke in June, 1949, were Dr. Harold W. Miller, Woodstock, Virginia, President of the Northern Virginia Medical Society, as a representative of the Medical Society of Virginia, and Henry S. Johnson, Director of Public Relations.

Both were given prominent places on the program and it is expected that Dr. Miller's paper will appear in an early issue of the Virginia Pharmacists' monthly publication (*"The Virginia Pharmacist"*).

Senators and Congressmen Contacted.

Telegrams were sent on June 23rd and June 24th from the Public Relations Department of the Medical Society of Virginia to our representation in Washington urging their effort in the defeat of House Bills 2892 and 2893, and also Senate Bill 1411 (Section C).

House Bill 2892 proposes the inclusion of weekly payments in the event of disability and House Bill 2893 proposes bringing self-employed persons under social security now covering employees.

Senate Bill 1411 (Section C) proposes free medical care to all school children from the age of five to seventeen years, regardless of financial status.

Your Public Relations Committee feels that the members of the Society should have this informtion in order that the local societies and members may follow through with additional communications in opposition to these Bills.

Also a letter was sent to the Council and to members of the District Council informing them of this action.

Survey of the Medically Indigent.

A survey to collect pertinent data concerning the problem of adequate care for the medically indigent of Smyth County was recently initiated by the Smyth County Medical Society.

A committee of six doctors headed by Dr. R. C. Potter conducted the survey and presented its tabulated results and recommendations to the Society. A final analysis of the figures showed that Smyth County was not out of line in comparison with other counties in providing medical aid for indigents.

With this in mind a series of resolutions were submitted to the Smyth County Medical Society for adoption which if accepted, they believe, would serve as a working plan for the improvement of the medical care of the medically indigent.

Pharmacists Pass Resolution.

The Virginia Pharmaceutical Association at its 68th annual convention held at Roanoke, Virginia,

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in June passed a resolution opposing any form of socialized medicine or COMPULSORY health insurance.

In passing this resolution their name was added to the steadily growing list of prominent organizations in the state that have gone on record in opposition to government controlled medicine.

Thus another strong force is willing to stand up and be counted and offer its services in the preservation of our present system of medical care and individual enterprise in America.

Local medical societies that have advised this office that they have adopted a resolution opposing compulsory health insurance include: Albemarle, Lynchburg, Loudoun, Norfolk and Williamsburg-James City.

Other organizations that have adopted similar resolutions include: The State Federation of Business and Professional Women's Club, The Culpeper Lions Club, The Life Insurers Conference, The Norfolk Association of Commerce, The Virginia Association of Insurance Agents, The Virginia Baptist Hospital and The Virginia State Chamber of Commerce.

CORRESPONDENCE

Zollikoferia—Floral Eponym.

TO THE EDITOR:

Having read with interest in the "VIRGINIA MEDICAL MONTHLY" (June 1949, page 274) the note about the "Floral Eponym" *Zollikoferia,* I looked up the subject in Meyer's encyclopaedia published in 1858.

It appears that Blake's information about Zollikofer's nationality is correct, but that Pritzel's statement about his legal activity should be rectified by indicating that Zollikofer was a physician. According to Meyer De Candolle dedicated the floral eponym: "Zollikoferia" to two genera of the compositae Cichoriaceae, because Zollikofer published in 1928 a tentative alpine flora of Switzerland.

I take the liberty of submitting these data, because I am interested in botany and history, although professionally I am a dermatologist.

KARL G. ZWICK, M.D.

Cincinnati, Ohio
June 18, 1949

EDITORIALS

Walter Reed (1851-1902)

THE Medical Society of Virginia owns a story and a half hut with the high sounding name of "Belroi". It is located on the outskirts of Gloucester Court House and is reverently cared for by a Committee composed of Drs. J. W. Smith, J. D. Clements and Clarence Porter Jones and the ladies of the Mid-Tidewater Auxiliary. In 1851 this hut was the temporary Methodist parsonage and it was here on September 13th that Walter Reed was born, the youngest of six children. His father was the Rev. Lemuel Reed, a North Carolinian of English descent and his mother was Pharaba White, a daughter of a North Carolina planter, who also came of a good English family.

A circuit rider and a physician have much in common in the way of hardships and devotion to duty, and so the future conqueror of yellow fever began life in almost a medical atmosphere. One of the older brothers went into the Methodist ministry and was for four years our pastor. He was lovingly called "One arm Reed" because one of his arms was shot away at the Battle of Sharpsburg. This man's simple faith and manliness endeared him to all with whom he came in contact. These qualities were characteristic of the family.

The Rev. Lemuel Reed held various charges in the Virginia Conference. When Walter was six years old he began his schooling with Mrs. Booker in Farmville. When he was fifteen years of age, his family was sent to Charlottesville and Walter entered a private school kept by Mr. Abbott. At sixteen he entered the University of Virginia. In 1869 he graduated in medicine after a single course of nine months. He was the youngest medical graduate in the history of the University and he ranked third in his class. He then went to New York and matriculated at the Bellevue Hospital Medical College a year later. He served as an interne in several hospitals in New York and Brooklyn. Next he became an inspector for the Brooklyn Health Department. While he was in Brooklyn one of the Blincoe boys thought it was a good time for him to see New York. Arriving in New York before going to Brooklyn, he stopped in a saloon kept by John L. Sullivan for a glass of beer. When he got to Brooklyn he said, "Uncle Walter, shake the hand that shook the hand of John L. Sullivan" and with a twinkle in his eye, Uncle Walter replied, "Look in the eyes that have looked in the eyes of Buffalo Bill."

His first assignment as an Army Surgeon was in Arizona and for eighteen years with three intermissions he was stationed on what was then a frontier. There he learned the ways of the Army and also practiced medicine on the nearby settlers and Indians. In 1881 when he was stationed for a short time at Fort McHenry, Baltimore, he studied physiology at the Johns Hopkins University. In 1890-91 he was again stationed in Baltimore as examiner of records. By this time the Johns Hopkins Hospital had started and Walter Reed put in practically all his time in studying the new science of bacteriology under Dr. Welch in the department of pathology. Here he soon made a place for himself among his fellow workers and it was recognized that he had unusual aptitude for the work he had undertaken. In 1891 he was sent to Dakota but was recalled in 1893 and assigned as curator of the Army Medical Museum and professor of bacteriology and clinical microscopy in the newly established Army Medical School.

From this point his career is well known throughout the world. When typhoid fever broke out in the military camps in the Spanish American War, he headed a commis-

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sion of investigation. The outcome was two large authoritative volumes on the epidemiology of typhoid fever. The practical outcome was a knowledge of flies in the spread of the disease and the revision of the Army regulations giving the medical officers authority in sanitary matters. Important as was the work of the typhoid commission, it was only preliminary to the great work of the United States Army Special Yellow Fever Board of which he was the head.

The story of the conquest of yellow fever has been told many times by many people. None has told it better than Dr. Philip S. Hench of the Mayo Clinic. Furthermore Dr. Hench has discovered new details in the story and has corrected a mistake of 35 years standing in the location of Camp Lazear. The work of the Yellow Fever Board lasted eight months and three months later Gorgas had freed Havana from the disease for the first time in 150 years.

The story of the conquest of yellow fever is especially dear to the American heart. From every aspect it is typically American. In the first place, it was a brilliant acchievement of American medicine. Everyone who had made advancement in the mosquito theory—Nott, Carter, Finlay, Agramonte, Lazear and Reed were Americans (including Cuba). In the second place, it exemplified the extraordinary bravery of the American soldier who voluntarily and without pay, submitted to the necessary experiments. Thirdly, this essentially American plague had been endemic in the West Indies whence it periodically invaded the cities of the Atlantic Seaboard and the Gulf States, paralyzing commerce and striking terror into the hearts of the people; and fourthly, the control of this scourge and its twin, malaria, enabled American engineers to dig the Panama Canal where French engineers had previously failed.

The Atlantic City Meeting of the A.M.A.

THE Annual Meeting of the American Medical Association is the occasion of the gathering together of countless doctors from all over the world. Groups that could not otherwise attract a quorum arrange their meetings at or near this time in order to have a successful meeting. It seemed to us that there were more such gatherings this year than usual. Certainly we had more difficulty in getting them all in. There should be some coordinating agency through which these meetings could clear, such as is done with debutante parties in most cities. The mellow sunshine, balmy breezes and peaceful ocean were other distractions. It was difficult to resist the lure of the boardwalk and partake of the strenuous mental fare offered in the Convention Hall and the various sectional meeting places.

No one person could hope to give an adequate report of the arduous week. We understand that the House of Delegates was unusually busy. The fifth annual conference of presidents and other officers of state medical associations had a most excellent program. Dr. William Alan Richardson, the editor of *Medical Economics,* gave a comprehensive report of the British National Health Service. He recently spent a month in England to see how the plan is working. It is tremendously expensive and is now costing 10 per cent of the entire government budget. One old lady with whom he talked blamed this country for, she said, if it had not been for the Marshall Plan, England could never have put the health plan over. The plan is growing less popular with the people and the term "four-minute" medicine is frequently heard. Dr. George Lull spoke on the importance of the state societies. He frequently gets letters suggesting that he tell such and such state society to do so and so. The shoe is on the other foot, he said, the state society tells him what to do.

The highlight of the conference was the address of Mr. Cecil Palmer of London. He said that the British Minister of Health manoeuvered the British doctors from their strong position of opposition to the compulsory health plan on moral grounds, for a discussion on an economic basis. Many of the doctors are now finding that they are worse off financially and are having to go into their capital savings to make both ends meet. He also spoke of the long queues in the "surgeries" and the lack of hospital beds for those who really needed hospital treatment. The plan is an idealistic one, he said, that can only work in Heaven where it is not wanted or in Hell where they have it already. As to the privacy of the patients' communications with the doctor which was promised, that no longer exists. Three weeks after the plan went into effect there was issued "statutory instrument" No. 506 to the effect that the diagnosis and treatment of each case must be filled out in triplicate. One copy goes to the local committee and the second copy to the district committee. He explained that a statutory instrument was a ruling of a Minister of the Crown which had all the force of law. It was never debated in the House of Commons and there was no appeal from it to the court.

The American Society for the Study of Sterility had interesting sessions. Much was said here and in the sections on obstetrics and gynecology on the value of pregnandiol determination and the basal temperature curve. M. R. Thompson, a Ph.D. from Connecticut, spoke on the nutritional requirements in human reproduction, emphasizing the importance of natural vitamin B. When asked how he explained the fertility in Asiatic countries where most of the people suffer from chronic malnutrition, he replied that he did not know anything about those countries.

The general scientific meetings were well attended. In fact it was difficult to get close enough to see what the speakers looked like. However, the acoustics were perfect. Perrin Long was enthusiastic about the new antibiotics, aureomycin and chloromycetin. They seem to have no serious toxic effects, and being able to administer them by mouth, made their use in home therapy possible.

The University of Pennsylvania School of Medicine television program in color, sponsored by Smith, Kline and French, attracted great crowds. Although it was shown in two large rooms on the third floor, standing room was at a premium. The scientific and commercial exhibits filled the great convention hall. They were well patronized. Many had long queues before them. The Philadelphia Pathological Society demonstrated fresh specimens from the operating rooms of the Philadelphia and Atlantic City Hospitals. The Inaugural Meeting on Tuesday evening was the only part of the convention we saw that was not well attended. The ballroom of the Convention Hall was scarcely more than half filled. Besides the presidential address, there was one on Dr. Frank B. Wynn, the Founder of the Scientific Exhibits of the A.M.A. and one by Brig. Gen. Crawford F. Sams on Medicine in Japan. We were surprised to learn how backward the Japanese were in medical matters. They had the highest tuberculosis death rate in the world and more second rate doctors.

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SOCIETIES

The Hanover County Medical Society

Met in the Randolph-Macon College Administration building in Ashland on June 21 with Dr. A. E. Murray, President, presiding. The guest speaker was Dr. Guy W. Horsley, Councillor for the District who gave a very interesting talk on the government's proposed pre-paid medical plan. He discussed briefly the Virginia Medical Practice Act and gave some of his observations of the American Medical Association meeting in Atlantic City. Dr. M. Pierce Rucker, President of the Medical Society of Virginia and Mr. Henry S. Johnson, Director of Public Relations of the State Society were guests at this meeting and both gave short talks.

The next meeting will be held at 8:30 P. M. on the first Tuesday in September.

JOHN D. HAMNER, JR.,
Secretary-Treasurer

The Wise County Medical Society

Enjoyed a fine Dutch Treat meal at Hotel Norton, Norton, on the evening of June 22nd, with seventeen members in attendance. An illustrated lecture on Pancreatitis was given by Dr. J. B. Floyd, an outstanding young surgeon from Lexington, Kentucky.

A strong resolution against socialized medicine was passed unanimously, and a speakers' group, composed of Drs. J. H. Hagy, J. D. Culbertson, G. T. Sutherland, W. B. Barton, J. J. Porter, and G. W. Botts, was selected. These will follow A.M.A. plans in an effort to have the people understand the hazards in the proposed legislation.

Dr. J. Robert Massie, St. Luke's Hospital, Richmond, will be the speaker at the next meeting on September 8th.

T. J. TUDOR, *Secretary*

The Williamsburg-James City County Medical Society

Met on June 17, at Williamsburg, with Dr. Joseph E. Barrett, President, in the chair.

After some discussion of a communication from Dr. John T. T. Hundley, State Education Chairman, the Secretary was instructed to write a letter to the appropriate Congressmen and Senators stating the Society's opposition to the compulsory Health Insurance bills now pending in Congress.

Mr. Rawls Byrd, Superintendent of the Schools in Williamsburg, Mr. Clarence Jennings, Superintendent of Schools for James City, New Kent, and Charles City Counties, spoke to the Society. They described their respective Health programs. After some discussion of the health problems of the schools and the relationships of the society members to this program, it was moved by Dr. Stokes and seconded by Dr. Keppel that the president should appoint an advisory committee to consult with the school officials as to their health programs.

GRANVILLE L. JONES, *Secretary*

The Tazewell County Medical Society

Met for its regular bi-monthly dinner meeting on June 22nd, at the Oasis Restaurant, Tazewell. There were fifteen members and four guests present.

Dr. John D. Winebrenner, Director Medical Care, United Mine Workers, District 28, Johnson City, Tennessee, conducted a Question and Answer Hour concerning the medical set up of the United Mine Workers Health and Retirement Fund.

The next meeting of the society will be held at the Tazewell Country Club on August 17th. The members of the Buchanan—Dickenson Medical Society, the Russell County Medical Society, and the Mercer County Medical Society, are to be guests.

MARY ELIZABETH JOHNSTON, *Secretary*

NEWS

The Chamberlin Hotel—Our Meeting Place.

Here is a picture of the Chamberlin Hotel at Old Point Comfort, Virginia, which will be the scene of the annual meeting of the Medical Society of Virginia, October 9 to 12. The Chamberlin is situated on the grounds of Fort Monroe. In case of interference with the fortifications the owners must pull down the hotel at their own expense if requested by the military authorities. This clause in the contract with the government has been invoked twice in the past, once during the Civil War and again during World War II when partial dismantlings were ordered. It is further stipulated that the owners cannot sell the hotel without permission from the commanding officer of Fort Monroe. How did it happen that a gay seaside pleasure resort took up such a precarious existence on the soil of the grim and exacting old fort?

The story goes back 129 years when one William Armistead opened a hotel for the workmen who were building Fort Monroe. The Hygeia Hotel, as Armistead called his inn, catered for some years to workmen and civilian employees of the fort. In 1832 the Indian chief Black Hawk and several of his braves were imprisoned at the fort following the Black Hawk War in Illinois. Visitors who flocked from far and wide to view the fierce redskins put up at the Hygeia Hotel. In this way the Hygeia became a tourist hotel. During the Civil War part of the hotel had to be torn down because it interfered with the range of the guns of Fort Monroe. The wing left standing was used for a hospital. After the war the Hygeia was rebuilt by Messrs. Clark and Wilson, but it proved unprofitable and eventually it came into the hands of Harrison Phoebus after whom the nearby town of Phoebus is named. Under his management the Hygeia Hotel became renowned all up and down the Atlantic seaboard for its excellent service and Old Southern atmosphere. It was "a place where diplomats and government officials mingled with the elite of Baltimore, Philadelphia, Richmond, and the Deep South." In 1881 when our Medical Society of Virginia met there the Hygeia Hotel was in its heyday.

After the death of Phoebus, the Hygeia was merged with the newly built Chamberlin Hotel opened in 1894. This building which is recalled as the "Old Chamberlin" was destroyed by fire in 1920. It is enshrined in the memory of many of the older residents as a center of Peninsula social life in the 1890's and early 1900's. The present structure often called the "New Chamberlin" was opened in 1928 and has been in continuous operation ever since. The Chamberlin ("Old" and "New") has been host to such varied celebrities as Franklin D. Roosevelt, Herbert Hoover, Woodrow Wilson, William Howard Taft, General Eisenhower, Cornelius Vanderbilt, Billie Burke, Rex Beach, Vernon Castle and Mabel Normand. During World War II it was used by the Navy to house officers and their families. Shortly after the outbreak of hostilities the owners were required to demolish the imposing tower on the Chamberlin's roof because it afforded a landmark for prowling Nazi submarines. This was the second time that the demolition clause in the contract had to be invoked for military reasons.

The present Chamberlin Hotel is the inheritor of 129 years of hotel tradition on Old Point Comfort: William Armistead's modest inn of 1820; Harri-

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son Phoebus' elegant post-bellum pleasure resort; the palatial "Old Chamberlin" of the gay 90's. But according to the contract given by the Government to William Armistead and passed on to successive owners, the existence of the hotel hangs by the slender thread of military expediency. The hotel may stay only if it does not get in the way of the fort.

There has been a fort on Old Point Comfort ever since the coming of the first Englishmen. Fort Monroe is the third in a series of forts. The first was Fort Algernourne constructed in 1609 by the Jamestown settlers to protect against raids by Spaniards. In 1729 this fort was replaced by Fort George which despite its very solid construction was blown away by a disastrous hurricane described by the old chronicler as the "great gust" of 1749. Construction of the present fort was begun in 1819 and completed in 1847. It was named after James Monroe, president of the United States from 1816 to 1824, whose administration has gone down in history as "The Era of Good Feeling." Fort Monroe contains the only fortress in the country surrounded by a water-filled moat. (A fortress is a fort within a fort.) Entrance into the fortress is over a bridge as in medieval castles. The walls of the fortress contain chambers which were occupied by the garrison in bygone years. These chambers are known as the casemates. A historical marker calls attention to the casemate where Jefferson Davis was confined; also, a plaque has been placed by the United Daughters of the Confederacy commending a certain U. S. Army medical officer for kindness to Davis during his imprisonment at the fort. On the green inside the fortress is a charming Protestant chapel known as "The Church of the Centurion," where President and Mrs. Woodrow Wilson were fond of worshipping during their visits to Old Point Comfort.

The fortress is now obsolete, a historic relic, but the fort is active and modern. Fort Monroe is the headquarters of General Devers, Chief of the Army Ground Forces for the entire United States. His splendid dwelling is near the hotel. From the veranda of the Chamberlin one sees the fortified island of Rip Raps out in Chesapeake Bay officially known as Fort Wool after a general of the Mexican War of 1848. The garrison of this satellite fort leads a rather lonely life as the only communication with land is by boat.

Such is the romantic story of the Chamberlin Hotel, your meeting place. The medical profession of the Virginia Peninsula looks forward to greeting you in its spacious halls next October.

CHESTER D. BRADLEY

University of Virginia, School of Medicine.

At the commencement exercises of the University of Virginia, held in June, the following were awarded the degree of Doctor of Medicine and are listed with their hospital appointments:

UNIVERSITY OF VIRGINIA HOSPITAL, Charlottesville—Drs. Allan LeRoy Armstrong, Miami, Fla.; Donald Hugh Ferguson, Terre Haute, Ind.; Edward Halsell Fite, Jr., Muskogee, Okla.; Frank Imboden Hobbs, Lynchburg; Ira Clair Liebrand, Helena, Okla.; Michael Potter, Princeton, N. J.; Harvey Daniel Smallwood, Roanoke; and Harold Ray Yarbro, Jackson, Tenn.

MEDICAL COLLEGE OF VIRGINIA HOSPITALS, Richmond—Dr. Spencer Pippen Bass, Jr., Tarboro, N. C.

GRADY MEMORIAL HOSPITAL, Atlanta, Ga.—Dr. Lundie Weathers Barlow, Jr., Richmond.

EPISCOPAL HOSPITAL, Philadelphia, Pa.— Dr. Francis Elwood Barrett, Coudersport, Pa.

JOHN SEALY HOSPITAL, Galveston, Tex.—Drs. Eugene Russell Bebeau, Schoolfield, and John David Varner, El Paso, Tex.

VIRGINIA MASON CLINIC, Seattle, Wash.—Drs. John Bayard Britton, Charlottesville, and George Edward Troxel, Baltimore, Md.

THE NEW YORK HOSPITAL, New York, N. Y.—Drs. William Upson Cawthon, Montgomery, Ala., and Donald Leslie Weeks, Jr., Richmond.

BAYAMON DISTRICT HOSPITAL, Puerto Rico—Dr. Thomas A. Cook-Garcia de Quevedo, Santurce, P. R.

SYRACUSE MEDICAL CENTER, Syracuse, N. Y.—Dr. Robert Vincent Crowder, Jr., Lynchburg.

U. S. PUBLIC HEALTH SERVICE, Staten Island, N. Y.—Drs. James Lovern Deadwyler, Elberton, Ga.; Trent Laviano, Long Island, N. Y.; Bridger Pearl Little, Jr., Chester, S. C.; and Robert Arthur Marks, Jr., Long Island, N. Y.

ST. LOUIS CITY HOSPITAL, St. Louis, Mo.—Dr. Patrick Salvatore Ferazzi, Bayonne, N. J.

MICHAEL REESE HOSPITAL, Chicago, Ill.—Dr. Robert Emery Gould, New York, N. Y.

CINCINNATI GENERAL HOSPITAL, Cincinnati, Ohio—

Drs. Campbell Harris, Jr., Richmond, and Ammon Walter Hoover, Harrisburg, Pa.

MILWAUKEE COUNTY HOSPITAL, Milwaukee, Wis.—Drs. James Edward Henney, Kohler, Wis.; Donald Robert Pierce, Beloit, Wis., and John Henry Russell, Tarrytown, N. Y.

SINAI HOSPITAL, Baltimore, Md.—Dr. Leon Edward Kassel, Baltimore, Md.

GERMANTOWN DISPENSARY & HOSPITAL, Philadelphia, Pa.—Dr. Thomas Allen Kirk, Jr., Roanoke.

ST. LUKE'S HOSPITAL, Chicago, Ill.—Drs. William Edgar Lawton, Jr., Mount Hope, W. Va., and Harry Baylor Taylor, Jr., Anking, China.

ST. LOUIS CITY HOSPITAL, St. Louis, Mo.—Dr. Miriam Lending, Charlottesville.

UNIVERSITY HOSPITAL, Ann Arbor, Mich.—Dr. Davis Craig Lucas, Blacksburg.

JACKSON MEMORIAL HOSPITAL, Miami, Fla.—Dr. Walter Ramon McCook, Key West, Fla.

WESLEY MEMORIAL HOSPITAL, Chicago, Ill.—Dr. Eugene Sheldon Mendelsohn, Chicago, Ill.

BELLEVUE HOSPITAL, New York, N. Y.—Dr. David Alan Mullon, Port Washington, N. Y.

BOSTON CITY HOSPITAL, Boston, Mass.—Dr. Joseph Allan Offen, Brookline, Mass.

TOURO INFIRMARY, New Orleans, La.—Dr. Harry Wampole Reinstine, Jr., Jacksonville, Fla.

COOK COUNTY HOSPITAL, Chicago, Ill.—Dr. Frank Raymond Richmond, Jr., Fort Madison, Ia.

CHARLOTTE MEMORIAL HOSPITAL, Charlotte, N. C.—Dr. Albert Vinson Rigsbee, Durham, N. C.

BROOKE GENERAL HOSPITAL, San Antonio, Tex.—Drs. John Alden Rogness, Madison, S. D., and Robert Ludwig Sundre, Duluth, Minn.

HOSPITAL OF UNIVERSITY OF IOWA, Iowa City, Ia.—Dr. John Chrysostom Rourke, New Orleans, La.

UNIVERSITY OF OREGON HOSPITAL AND CLINICS, Portland, Ore.—Dr. William Maurice Snook, Portland, Ore.

MT. SINAI HOSPITAL, New York, N. Y.—Dr. Martin Herman Sternstein, Newark, N. J.

WAYNE COUNTY GENERAL HOSPITAL, Detroit, Mich.—Drs. Francis Simon Sullivan, Cambridge, Mass., and Josephine Young Sullivan, Anderson, S. C.

MONTEFIORE HOSPITAL, New York, N. Y.—Dr. Marvin Melvin Thalenberg, New York, N. Y.

FITZSIMONS GENERAL HOSPITAL, Denver, Colo.—Dr. Douglas James Thompson, Charlottesville.

COLORADO GENERAL HOSPITAL, Denver, Colo.—Dr. John Marshall Vivian, Phoenix, Ariz.

U. S. PUBLIC HEALTH SERVICE, New Orleans, La.—Dr. Harry Gordon Walker, Charlottesville.

HERMANN HOSPITAL, Houston, Tex.—Dr. Henry Harrison Wilson, Jr., Radford.

Dr. Charles Franklin Tate, Newport News, is also a member of this graduating class.

American Medical Association.

At the annual meeting of this Association, held in Atlantic City, June 6-10, there was a registered attendance of 13,221 physicians and 14,671 guests. Dr. Ernest E. Irons, Chicago, succeeded to the presidency, and the following officers were elected: president-elect, Dr. Elmer L. Henderson, Louisville, Ky.; vice-president, Dr. James Francis Norton, Jersey City; Secretary, Dr. George F. Lull, Chicago (re-elected); treasurer, Dr. Josiah J. Moore, Chicago (re-elected); speaker of the House of Delegates, Dr. F. F. Borzell, Philadelphia; and vice-speaker, Dr. James R. Reuling, Bayside, N. Y.

Dr. Seale Harris, Birmingham, received the A.M.A.'s 1949 Distinguished Service Medal.

The next interim session of the Association will be held in Washington, D. C., December 6-9, and the next annual session will be in San Francisco, California.

Dr. Reese Celebrates Fifty Years of Practice.

On May 11th, Dr. Emmett F. Reese, Jr., Sebrell, observed his fiftieth anniversary as a physician by giving a steak dinner to the doctors of the county. Those present to congratulate him were Drs. W. T. McLemore and W. F. Daughtry, Jr., Courtland; Dr. J. M. Bland, Boykins; Drs. Ashley P. Cutchin, J. C. Rawls, C. F. Gryte, T. Addison Morgan, W. D. Varner, Henry L. Gardner, Franklin L. Angell and Janet Jacobson, Franklin. Dr. McLemore was a classmate of Dr. Reese at the University College of Medicine.

Dr. Emmett F. Reese, III,

Has returned to this country after service with the U. S. Army in Japan and has opened his office at the Raiford Memorial Hospital in Franklin, where he will be engaged in general practice. He is a graduate in medicine of the University of Virginia, class of 1946.

New Annex to De Paul Sanitarium.

Construction has been started on an ultra-modern,

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five story annex to De Paul Sanitarium in Norfolk and is expected to be completed by the end of 1950. Rosary Clinic, as the new building will be named, will afford the latest in modern hospital facilities. It will add 100 beds to the hospital and is so designed that each floor is a complete unit. There will be fifteen special therapeutic recovery rooms for the acutely ill, each to be soundproofed and air-conditioned. A conference room is provided in each unit for the convenience of the faculty and medical staff. The fifth floor is to be the recreation area with a capacity of two hundred. There will be a corrective gymnasium and two roof gardens for sun baths.

American College of Surgeons.

The Clinical Congress of the College will be exceptionally world-wide in character when it convenes in Chicago, October 17-23, because it will include the Sixth Inter-American Congress of Surgery and because many delegates from the 13th Congress of the International Society of Surgery, which meets in New Orleans the previous week, will also attend. Dr. Frederick A. Coller of Ann Arbor, Michigan, who will be inducted as President of the American College of Surgeons at this meeting, is President of the Sixth Inter-American Congress of Surgery. This will be the first time that the latter has met in the United States.

Dr. John B. Parsons,

A Fellow in Surgical Pathology at the University of Virginia, has been awarded a clinical fellowship by the American Cancer Society. He is one of forty doctors who will receive specialized training in cancer through these fellowships.

Richmond Physician Honored by Greeks.

Dr. Oswald F. Hedley, a native of Danville, has been made an honorary citizen of the city of Lamia, Greece, in recognition of his work in the field of public health in that area. He is director of the public health division of the Economic Cooperation Administration's mission in Greece. Dr. Hedley had lived for sometime in Richmond and received his medical degree from the Medical College of Virginia. He entered the U. S. Public Health Service immediately upon graduation.

The International College of Surgeons,

United States Chapter, will hold its fourteenth annual assembly and convocation in Atlantic City, New Jersey, November 7-12. All doctors of medicine interested in surgery and its advancement are invited to attend, and can obtain a program upon request to Arnold S. Jackson, M.D., Secretary, Jackson Clinic, Madison 4, Wisconsin. For hotel reservations, contact E. D. Parrish, Haddon Hall, Atlantic City, New Jersey.

Dr. Charles T. Garcia,

Formerly of Cape Charles, has joined the regular army with the rank of Major and is Flight Surgeon at Langley Air Force Base, Hampton.

Dr. Walter R. Johnson,

Recently of Richmond, is making his home in Garrisonville, Stafford County. On July 1st, he retired from the U. S. Navy after nearly thirty-one years of service.

Dr. Nathaniel Ewell, Jr.,

Recently of Charlottesville, has located in South Boston where he is affiliated with Drs. William Watkins and Pat Driscoll in the general practice of medicine.

Dr. Oliver F. Blankingship,

Richmond, is in Bay Pines, Florida, for an indefinite stay.

Dr. M. L. White, Jr.,

Has opened an office at 817 First Huntington National Bank Building, Huntington, West Virginia, where he will practice thoracic surgery and related endoscopy. He resigned as assistant professor of surgery at the University of Virginia on June 1st.

Correction—"Intrathoracic Hour-Glass Ganglioneuroma".

Dr. H. Clarkson Meredith has reported an error in his article on "Intrathoracic Hour-Glass Ganglioneuroma" published in the June issue of the MONTHLY. On page 289 in Figure I, the pictures are in reversed order, the one on the right being after and the one on the left before surgical removal.

American College of Chest Physicians.

At the fifteenth annual meeting of the College, held in Atlantic City, June 2-5, Dr. Dean B. Cole, Richmond, was re-elected Regent for a term of three years.

Dr. E. C. Harper, Richmond, is the Governor of the College for the State of Virginia.

The Virginia Chapter of the College held its annual meeting in Richmond March 1st and elected the following officers: President, Dr. E. C. Drash,

Charlottesville; vice-president, Dr. Kinloch Nelson, Richmond; and secretary-treasurer, Dr. C. W. Scott, Burkeville.

Medical Society of Virginia—1881 Meeting.

Thirty-five doctors registered for the meeting of the Medical Society of Virginia at the Hygeia Hotel, Old Point Comfort, in 1881, according to Dr. and Mrs. Chester D. Bradley of Newport News. The Bradleys recently studied the 1881 Transactions in our office to obtain material for a historical exhibit they are preparing for the forthcoming meeting of the Medical Society of Virginia. Judged by our modern standards 35 is a mere handful compared to the crowd which is expected at the Hotel Chamberlin, Old Point Comfort, in October. However, the Bradleys point out that in 1881 there were fewer doctors in Virginia, that only a portion of them belonged to the Medical Society of Virginia, and that travel in those days was by train and boat only. In fact there was no direct rail line to Old Point Comfort in 1881.

Here are the names of our predecessors in Virginia medicine who attended the Old Point Comfort meeting of 1881: J. A. Alexander, Broadway; L. Ashton, Falmouth; Harvey Black, Williamsburg; Kent Black, Blacksburg; James T. Boutelle, Hampton; Charles Brittan, Richmond; Bedford Brown, Alexandria; C. A. Bryce, Richmond; J. E. Chancellor, University; C. C. Conway, Rapidan; F. B. Cunningham, Richmond; E. A. Drewry, Drewrysville; Landon B. Edwards, Richmond; J. M. Estill, Tazewell; W. B. Gray, Richmond; S. K. Jackson, Norfolk; M. L. James, Richmond; Meade C. Kemper, Goshen; Henry Latham, Lynchburg; O. F. Manson, Richmond; G. W. O. Maupin, Portsmouth; Hunter H. McGuire, Richmond; S. B. Morrison, Natural Bridge; H. M. Nash, Norfolk; R. H. Parker, Portsmouth; D. C. Pharr, McDonald; W. L. Robinson, Danville; W. T. Sutton, Norfolk; T. James Taylor, Walton; Z. G. Walker, Brownsburg; W. R. Winchester, Leesburg; Isaac White, Shawsville; Joseph A. White, Richmond, and George William Semple, Hampton.

The Newport News daily papers are showing great interest in our October meeting. A reporter who is preparing a feature story about the Medical Society of Virginia asked if any descendants of the men of 1881 might be expected to attend our 1949 meeting. Dr. Bradley hastily consulted Dr. Wyndham B. Blanton of Richmond, the distinguished medical historian. Dr. Blanton was able to state that the following men of 1881 are represented by descendants in the medical profession today: Hunter H. McGuire by Hunter McGuire, Richmond and William P. McGuire, Winchester; O. F. Manson by R. Campbell Manson, Richmond; Landon B. Edwards by Charles M. Edwards, Richmond; E. A. Drewry by Patrick H. Drewry, Jr., Richmond; S. B. Morrison by J. Morrison Hutchinson, Richmond; C. C. Conway has no medical descendants but the following are closely related to him: St. George Grinnan, William Grinnan, Wallace Blanton, Wyndham B. Blanton, all of Richmond. In addition, Miss Agnes V. Edwards, Secretary of the Medical Society of Virginia, is a daughter of Landon B. Edwards, who was for many years editor of the VIRGINIA MEDICAL MONTHLY.

C. D. B.

Dr. W. Lowndes Peple, Jr.

Class of '41, Medical College of Virginia, is located in Richmond where he is on the surgical staff of St. Luke's Hospital.

Dr. Holmes Named City Health Director.

Dr. Edward Marion Holmes, Jr., has been named Richmond City Health Director, effective August 16th. He will succeed Dr. C. Howe Eller who resigned to accept a position in Louisville. Dr. Holmes has been "executive officer" to Dr. Eller since June 1947 and has helped with a complete reorganization of the department.

Doctors Hold Civic Offices.

Dr. Percy Harris, Scottsville, was recently re-elected as Mayor to serve his fourth term.

Dr. Mary E. Johnston, Tazewell, has been elected to the Town Council.

Dr. F. I. Steele, Windsor, has also been re-elected a member of the Town Council.

Dr. Nancy B. King,

Richmond, recently received the Degree of Master of Science in Pediatrics from the University of Minnesota. She is a graduate of the Medical College of Virginia, class of 1945, and for the past three years has been a Fellow in pediatrics at the Mayo Clinic, Rochester. Dr. King plans to locate in Sandston.

Dr. Conrad L. Gossels,

Recently of Mount Jackson is now located at 2808 South Randolph Street (Shirlington), Arlington.

XUM

Dr. Charles E. Fiman

Has been named senior physician at Western State Hospital, Staunton. He is a graduate of the College of Medical Evangelists of California and has recently been psychiatrist at State Hospitals in New Jersey, North Carolina and Colorado.

Doctor Wanted

To take over retiring doctor's well equipped and furnished four-room office, including x-ray, etc. Well established practice in eastern Virginia, ten miles from modern hospital. Will sell complete practice or individual items. Contact Savage Insurance Agency, Williamsburg, Virginia. (*Adv.*)

OBITUARIES

Dr. Walter Lewis Williams,

Of Brookneal, one of the oldest practicing physicians in Virginia, died in Lynchburg, June 26th, after a short illness. He was eighty-seven years of age and a graduate of the Medical College of Virginia in 1885. Dr. Williams began the practice of medicine in Campbell County with his father at Maryville. He later moved to Brookneal and was a partner in the construction of the first bridge over the Staunton River, replacing the ferry at Brookneal. Dr. Williams had been a member of the Medical Society of Virginia for sixty-one years and was made a Life Member at its 1948 meeting. A daughter and two sons survive him.

Dr. William Gerry Morgan,

Nationally known physician of Washington, died July 7th. He was eighty-one years of age and received his medical degree from the University of Pennsylvania in 1893. Dr. Morgan was a former president of the American Medical Association, the American Gastronomical Society, American College of Physicians and Surgeons, and the District of Columbia Medical Society. He was made an Honorary Member of the Medical Society of Virginia in 1929 and a Life Member in 1948.

Dr. Arthur Douglas Parker,

Norfolk, died June 18th of coronary thrombosis. He was fifty-three years of age and received his medical degree from the College of Physicians and Surgeons, Columbia University, New York, in 1921. He located in Norfolk in 1924 where he practiced except for six years spent in the U. S. Navy. His wife and a son survive him.

Dr. Walter Neale Chinn,

Prominent physician of the Northern Neck, died at his home at The Hague on June 28th after a brief illness. He was seventy-seven years of age and a graduate of the Medical College of Virginia in 1901. Dr. Chinn took an active part in the civic and political affairs of his community and was also a prominent churchman. Four sons and two daughters survive him.

Resolutions on Dr. G. Blight Harrison.

The Fredericksburg Medical Society and The Staff of The Mary Washington Hospital acknowledge with deepest regrets the loss of one of their older and most beloved members. Doctor G. Blight Harrison, whose death occurred suddenly at his home in this city, May 17th, at the age of sixty-eight. Dr. Harrison had been in active practice in this community for forty-three years. He was graduated in medicine from the University of Maryland in 1906, and since then had taken several post-graduate courses in surgery and general medicine. He had been president of the local medical society and the Northern Neck Medical Society, and was a member of the American Medical Association and the Medical Society of Virginia.

BE IT THEREFORE RESOLVED That the Medical Society of Fredericksburg wishes to express to the family of Dr. Harrison their sincere sorrow in his sudden passing.

That the medical profession has suffered a great loss. From the beginning of his professional career, he gave freely of his time and talents and his attractive personality and deep sense of humor endeared him to his patients as well as to his professional colleagues.

The community has lost a valuable citizen and the medical profession a talented and beloved physician and friend who will be greatly missed.

BE IT FURTHER RESOLVED That a copy of these resolutions be sent to his family, to the *Fredericksburg Free Lance Star*, recorded in the minutes of The Fredericksburg Medical Society, and be sent to the VIRGINIA MEDICAL MONTHLY.

T. W. DEW, Chairman
FRANK PRATT
W. W. BUTZNER, JR.